

1 STATE OF MINNESOTA DISTRICT COURT

2 COUNTY OF RAMSEY SECOND JUDICIAL DISTRICT

3 - - - - -

4 The State of Minnesota,

5 by Hubert H. Humphrey, III,

6 its attorney general,

7 and

8 Blue Cross and Blue Shield

9 of Minnesota,

10 Plaintiffs,

11 vs. File No. C1-94-8565

12 Philip Morris Incorporated, R.J.

13 Reynolds Tobacco Company, Brown

14 & Williamson Tobacco Corporation,

15 B.A.T. Industries P.L.C., Lorillard

16 Tobacco Company, The American

17 Tobacco Company, Liggett Group, Inc.,

18 The Council for Tobacco Research-U.S.A.,

19 Inc., and The Tobacco Institute, Inc.,

20 Defendants.

21 - - - - -

22 DEPOSITION OF RICHARD D. THOMAS

23 Volume I, Pages 1 - 315

24

25

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1 (The following is the deposition of RICHARD
2 D. THOMAS, taken pursuant to Notice of Taking
3 Deposition, at Dorsey & Whitney, Attorneys at Law,
4 16th Floor, Pillsbury Center, Minneapolis, Minnesota,
5 commencing at approximately 8:28 o'clock a.m.,
6 October 8, 1997.)

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3	Control"	157
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1 P R O C E E D I N G S

2 (Witness sworn.)

3 RICHARD D. THOMAS

4 called as a witness, being first duly
5 sworn, was examined and testified as
6 follows:

7 ADVERSE EXAMINATION

8 BY MR. KAYSER:

9 Q. Sir, would you please state your full name and
10 spell your last name.

11 A. It's Richard Dean Thomas, T-h-o-m-a-s.

12 Q. And your address, sir?

13 A. DELETED.

14

15 Q. And who resides at DELETED with you,
16 sir?

17 A. My family.

18 Q. Can you tell me who those are?

19 A. Wife is Mary Jacquelyn, J-a-c-q-u-e-l-y-n,
20 Thomas, and -- I have to think how many children I
21 have there now. "Children," sort of children -- I
22 have, let's see, two sons right now -- three sons
23 living with me, and a daughter.

24 Q. And how old are your children, sir?

25 A. The oldest one is 24, the next oldest is 21, and

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1 then there's the 19-year-old, 16-year-old, and the
2 youngest is 13 years old.

3 Q. Do you have any grandchildren?

4 A. I have no grandchildren.

5 Q. Doctor, I know you've had your deposition taken
6 before. I'm going to be asking you some questions,
7 and the gentleman on your left and on my right will
8 be taking everything we say down on that machine,
9 later to be transcribed.

10 This deposition may be used for a variety of
11 purposes. Even though we don't have a court -- or a
12 judge and jury here, this should to some degree have
13 the same solemnity as court proceedings because, as I
14 say, it can be used for a variety of purposes. It's
15 also necessary that one of us be speaking only at one
16 time as opposed to both of us speaking at the same
17 time. Sometimes you may anticipate my questions,
18 sometime I may anticipate your answers, but we have
19 to let each other finish. Will you do that for me?

20 A. Yes.

21 Q. It's also important that you understand my
22 questions. Will you tell me if you don't understand
23 my question?

24 A. Yes, I will.

25 Q. And if you answer a question, I'm going to

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- 1 assume you understood it. Is that fair?
- 2 A. Yes.
- 3 Q. Are you planning on being present to testify
- 4 when this matter is called for trial in January of
- 5 1998?
- 6 A. Yes, I am.
- 7 Q. You're not a medical doctor, though; are you,
- 8 sir?
- 9 A. No, I'm not.
- 10 Q. You have a Ph.D. Do you --
- 11 Is that right, sir?
- 12 A. Yes.
- 13 Q. And your Ph.D. is in what?
- 14 A. In chemistry.
- 15 Q. When did you get that, sir?
- 16 A. Nineteen ninety -- 1974.
- 17 Q. From?
- 18 A. It was from Colorado State University.
- 19 Q. And are you employed now, sir?
- 20 A. Yes, I am.
- 21 Q. What do you do?
- 22 A. I'm director of the International Center for the
- 23 Environment and Health.
- 24 Q. Now what does that organization do?
- 25 A. They --

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1 The center conducts international studies on
2 public health, toxicology, hazardous materials,
3 environmental studies.

4 Q. And does it do it internationally?

5 A. Yes.

6 Q. How many employees do you have, sir?

7 A. There are about 25 employees.

8 Q. Do you hire consultants as needed?

9 A. Yes.

10 Q. And you have an epidemiologist on your staff, as
11 I recall?

12 A. Yes, we do.

13 Q. And his name is?

14 A. Jim Sonnaman.

15 Q. And you have an expertise in toxicology, too; do
16 you not, sir?

17 A. Yes, I do.

18 Q. And you agree that epidemiology is a respected
19 and legitimate scientific discipline in medicine?

20 A. Yes.

21 Q. Do you smoke, sir?

22 A. No.

23 Q. Have you ever smoked?

24 A. I may have smoked one time when I was very
25 young, but I don't smoke.

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1 MR. KAYSER: The record should reflect that
2 Mr. Tom Basting has joined us. Mr. Basting is
3 representing --

4 Well he can tell us who he's representing.

5 MR. BASTING: Good morning. Tom Basting.
6 I'll get my appearance. I'm pro hac vice for
7 Minnesota, and also representing the State of
8 Wisconsin in this litigation.

9 MR. KAYSER: Do you want to go off the
10 record for a moment?

11 THE REPORTER: We're off.

12 (Discussion off the record.)

13 BY MR. KAYSER:

14 Q. You were mentioning your smoking history just a
15 moment ago.

16 A. Yes. I don't smoke.

17 Q. Okay. Have you ever?

18 A. Like I say, probably when I was very young I
19 attempted, but along with young boys.

20 Q. You never -- never enjoyed it?

21 A. I just never continued.

22 Q. Does your wife smoke, sir?

23 A. No.

24 Q. Do any of your children smoke?

25 A. I have one son that smokes.

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- 1 Q. Which one is that? Just give me the age; I
2 don't need the name.
- 3 A. That's the 19-year-old.
- 4 Q. Have you discussed his smoking with him?
- 5 A. Yes.
- 6 Q. Have you told him not to smoke?
- 7 A. I've told him that that's his responsibility and
8 choice.
- 9 Q. Have you told him that smoking might be -- might
10 affect his health adversely?
- 11 A. I think he as a 19-year-old knows what he's
12 doing, and he makes his own decisions.
- 13 Q. My --
- 14 My question was: Have you told your 19-year-old
15 son that if he smokes, it might be unhealthy for him?
- 16 A. I've told him that he's increasing his risk of
17 various diseases.
- 18 Q. Have you named the diseases that he's increasing
19 his risk for by smoking?
- 20 A. I don't remember.
- 21 Q. Has he asked you which diseases he has an
22 increased risk for by smoking?
- 23 A. No.
- 24 Q. Have you discussed smoking with any of your
25 other children?

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- 1 A. Not that I remember.
- 2 Q. None of your children have come and talked to
- 3 you about smoking?
- 4 A. No.
- 5 Q. And the only person --
- 6 The only one's who's done it was the
- 7 19-year-old?
- 8 A. I talked with him about smoking.
- 9 Q. Did you advise him against smoking?
- 10 A. Yes, I advised him against smoking.
- 11 Q. Did you advise him against smoking because it's
- 12 unhealthy for him?
- 13 A. Principal reason I advised him against smoking
- 14 is we don't believe in smoking in our family.
- 15 Q. Why don't you believe in smoking in your family?
- 16 A. It's a religious preference.
- 17 Q. Which religion is that, sir?
- 18 A. The Church of Jesus Christ of Latter Day Saints.
- 19 Q. Is that the only reason you advised your
- 20 19-year-old not to smoke?
- 21 A. Well as I indicated, I also indicate -- told him
- 22 that he ran an increased risks -- risk of other types
- 23 of diseases if he continues to smoke.
- 24 Q. What other types of diseases does he run an
- 25 increased risk for by smoking, sir?

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1 A. Well there are epidemiologic studies which show
2 increased risks of various diseases such as lung
3 cancer, cardiovascular problems. But I don't think
4 that we got into those types of discussions. He's a
5 19-year-old and very independent and decides what he
6 wants to do.

7 Q. But he also has been growing up in your family
8 and would seek his father's advice from time to time;
9 wouldn't he, sir?

10 A. Not as a 19-year-old.

11 Q. But do you feel any interest in giving him
12 advice?

13 A. That's why I've talked with him about it.

14 Q. Do you believe that he runs an increased risk of
15 lung cancer by smoking?

16 A. The way I told him was that as he -- if he
17 continued to smoke, that he increased his risk.

18 Q. Of lung cancer.

19 A. Of lung cancer.

20 Q. And do you believe that?

21 A. I think the epidemiologic studies show that.

22 Q. Do you believe that? Do you believe that your
23 son runs an increased risk of lung cancer if he
24 smokes?

25 A. I don't know, not --

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1 As an individual it's very difficult to say.

2 Based on the epidemiologic studies, those are done on
3 populations. For an individual, statistically an
4 individual can't be separated out.

5 Q. But do you believe that your son runs an
6 increased risk of getting lung cancer if he smokes
7 cigarettes, sir?

8 A. Like I say, as an individual I'm not sure.

9 Q. Did you tell your son that you're not sure
10 whether he runs an increased risk of lung cancer if
11 he smokes?

12 A. No. Basically I told him that if he continued
13 to smoke, that his -- based on the studies that I've
14 seen, that his risk increases.

15 Q. Risk of lung cancer increases; is that right?

16 A. In other words, these are population studies
17 that we're talking about.

18 Q. No, I understand --

19 A. We don't --

20 We don't know whether those apply to an
21 individual person because they're statistical.

22 Q. I understand they're population studies, but I'm
23 talking about you talking to your son.

24 A. Uh-huh.

25 Q. Son that you love very much. Do you tell him

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1 that you're not sure because they are population
2 studies, or do you tell him that he runs an increased
3 risk of lung cancer by smoking?

4 A. In my discussions with my son, I talked with him
5 about not as much the health effects as our belief
6 within our family.

7 Q. The religious belief.

8 A. That's correct.

9 Q. So you didn't really discuss the health risks
10 with your son about smoking; is that right?

11 A. Not in very much detail.

12 Q. If I asked you this, I apologize, I don't mean
13 to be repetitive: Does your wife smoke, sir?

14 A. No.

15 (Plaintiffs' Exhibit 1400 was marked
16 for identification.)

17 BY MR. KAYSER:

18 Q. Doctor, I'm showing you what has been marked as
19 Plaintiffs' Exhibit 1400.

20 A. Yes.

21 Q. Which, as you can see, is your deposition in the
22 Mississippi matter. And we'll be referring to that
23 from time to time, so I just want to have you have
24 that handy.

25 (Plaintiffs' Exhibit 1401 was marked

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1 for identification.)

2 BY MR. KAYSER:

3 Q. And Exhibit 1401 is your report in this action;
4 isn't it, sir?

5 A. Yes, that's correct.

6 Q. I just want to confirm some matters that came up
7 in your Mississippi deposition so we can move this
8 along a little more quickly.

9 You claim an expertise in the area of
10 carcinogens; don't you, sir?

11 A. Yes.

12 Q. And you claim a special expertise in certain
13 areas of toxicology and exposure to carcinogens;
14 don't you, sir?

15 A. Yes.

16 Q. You've been involved in lung cancer issues for
17 approximately 20 years; haven't you, sir?

18 A. Yes.

19 Q. You have read the 1989 Surgeon General's report
20 and you're familiar with it; aren't you, sir?

21 A. Yes.

22 Q. Do you also agree that the Surgeon General has a
23 responsibility to make the public aware of
24 carcinogens they might be exposed to?

25 I refer you to page 83 of Exhibit 1400, sir.

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1 Continues on pages 84 and 85, sir. Start on page 83.

2 A. Yes.

3 Q. Do you have page 83?

4 A. Let's see.

5 Yes.

6 Q. Okay. Starting on line four and continuing
7 through line 25.

8 A. What was your question?

9 Q. My question is: Do you agree that the Surgeon
10 General has a responsibility to make the public aware
11 of carcinogens they might be exposed to as the
12 American public?

13 A. I think that's a very vague question. I'm not
14 sure quite what you mean by "carcinogens."

15 Q. Let's take --

16 A. And there are a lot of different carcinogens in
17 the environment.

18 I think the Surgeon General has a public health
19 responsibility to inform the public of public health
20 risks.

21 Q. And exposure to carcinogens is a public health
22 risk; isn't it, sir?

23 A. Like I say, it's -- I'm not sure what you mean.
24 There are a lot of --

25 We're all on a daily basis exposed to probably

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1 thousands of carcinogenic materials, and I can't
2 imagine the Surgeon General coming out and warning us
3 about a thousand different substances that we may be
4 exposed to, so I don't know how to answer your
5 question.

6 Q. Well doctor --

7 A. I think he has a responsibility to pick those
8 that he feels has an impact on public health and warn
9 the public about those that may help improve their
10 health.

11 Q. Well let's take a look at page 83 of your
12 deposition on March 26, 1997, sir. Do you have that
13 in front of you?

14 A. Uh-huh.

15 Q. You have to answer audibly.

16 A. Yes.

17 Q. And you'll note at line eight the question was
18 asked, quote, "Do you feel responsibility to the
19 public to make the public aware of carcinogens that
20 they might be exposed to?

21 Answer -- your answer: "Like I say, I don't
22 speak to the public as an official representing the
23 government or public health groups, so I don't have a
24 responsibility per se in that area. I have been
25 asked to speak for groups before, but I certainly

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1 don't --

2 "Question: You certainly don't what?"

3 Your answer: "I don't have a responsibility to
4 convey these types of messages to the public. That's
5 not what I'm asked to do.

6 "Question: Well, who does have the
7 responsibility to convey this information to the
8 public?"

9 Your answer: "Public health officials such as
10 the Surgeon General," unquote.

11 Did I read all that correctly, sir?

12 A. Yes.

13 Q. You want to change your answer here today?

14 A. No.

15 Q. Do you stand by that answer, sir?

16 A. Yes.

17 Q. So the Surgeon General does have a
18 responsibility to make the public aware of
19 carcinogens they might be exposed to?

20 A. When it affects the public health. That's what
21 that answer really says.

22 Q. And you believe the Surgeon General should tell
23 the American public the truth?

24 A. I would hope all public officials convey the
25 truth to the public.

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1 Q. And you hope the Surgeon General does; don't
2 you, sir?

3 A. Yes.

4 Q. Sir, on page three of Exhibit 1401, which is
5 your report here, in the last paragraph you talk
6 about the necessity of having an appropriate animal
7 model. Do you see that?

8 A. Yes.

9 Q. Do you believe that you must always have an
10 animal model before you can conclude that a
11 particular agent causes a particular human disease?

12 A. Yes, I do. It may be a whole animal model, it
13 may be part of an animal, but it has to be a -- a
14 laboratory model of some type, what I've called here
15 an animal model. The most common are whole -- whole
16 animals.

17 Q. Can you name a scientific authority for that
18 proposition, sir?

19 A. Well there are several attached.

20 Q. Can you name them for me?

21 A. Well the most well known and the one that's
22 considered the gold standard is Koch's Postulates.

23 Q. Can you spell that for us, sir?

24 A. K-o-c-h, Robert Koch. And they're called the
25 Koch's Postulates.

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1 Q. Other than the Koch Postulates, sir, can you
2 name any other peer review publication that says an
3 animal model is required?

4 A. Well there are thousands of -- of references
5 that refer to the importance of laboratory animal
6 models in confirming cause. I could just pick a
7 current one that was just published in 1996 by
8 Susser.

9 Q. Can you give me the name of the publication?

10 A. Let's see if it's listed in here.

11 It has a title something along the lines "On the
12 Issue of Causation," but I don't remember the
13 journal.

14 Q. That's fine.

15 Is it the position of any toxicology
16 organizations that you belong to that an animal model
17 is required to conclude that a particular agent
18 causes a particular human disease?

19 A. Could you --

20 I'm not sure I understand your question.

21 Q. Okay. Is it the position of any toxicology
22 organization that you belong to that an animal model
23 is required before one can conclude that a particular
24 agent causes a particular human disease?

25 A. Scientific organizations typically don't take

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1 positions as such, but in this particular case
2 organizations such as the American College of
3 Toxicology and the Society of Toxicology have both
4 indicated the importance of laboratory animal models
5 in confirming mechanisms of disease.

6 Q. Where would I find that information written,
7 sir, for those two organizations?

8 A. As policy statements, usually published in
9 newsletters.

10 Q. Do you know of any specific newsletters that
11 that's -- that can give me that information?

12 A. No.

13 Q. Do you know of any policy statement other than a
14 newsletter of those organizations that make -- you
15 could direct me to specifically?

16 A. Well as I indicated, those organizations would
17 make policy statements. Those policy statements
18 would be written separately but would be published in
19 newsletters. You would have to contact the
20 organizations to get their policy statements on the
21 use of laboratory animal models.

22 (Plaintiffs' Exhibit 1402 was marked
23 for identification.)

24 BY MR. KAYSER:

25 Q. Doctor, I'm showing you what has been marked as

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1 Plaintiffs' Exhibit 1402, and this is a page from the
2 1989 Surgeon General's report, which you say that you
3 are familiar with.

4 A. Yes.

5 Q. It's Table 8, page 89, and it's entitled "Some
6 toxic and tumorigenic agents in undiluted cigarette
7 sidestream -- sidestream smoke." Is that correct,
8 sir?

9 A. Yes, that's the title.

10 Q. I'd just like to have you take a look at that
11 for a moment, if you would, please.

12 Have you seen that table before today, sir?

13 A. Yes. There table actually comes out of a
14 publication which is Hoffmann and Hecht (1989) which
15 I've also read.

16 Q. And let's go through these, if you would. And
17 take a pencil, and what I want you to do is on the
18 right-hand side of the page indicate just whether you
19 agree or disagree with the -- with each agent that's
20 listed there.

21 Do you agree that carbon monoxide is present in
22 undiluted cigarette sidestream smoke, sir?

23 A. Yes, it's present.

24 Q. And is it a toxic agent?

25 A. Yes.

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1 Q. Would you just write "agree" next to that?

2 Would you just write "agree" as opposed to a check
3 mark? I'd appreciate it.

4 A. (Complying.)

5 Q. And if I pronounce these wrong, bear with me.

6 Carbonyl sulfide, is that a toxic agent that's
7 present in the undiluted cigarette sidestream smoke,
8 sir?

9 A. It appears to be. It's at low concentrations.

10 Q. Okay. Want to write --

11 A. I don't --

12 I'm not sure about that.

13 Q. Okay. Well just write --

14 A. That --

15 There are a lot of materials in tobacco smoke.

16 Q. Can you put either "agree" or "disagree" or
17 "unsure" or "don't know?"

18 A. I would put down "unsure."

19 Q. Okay. How about benzene? Is benzene a
20 carcinogenic agent present in cigarette smoke?

21 A. It's an agent that is present in cigarette
22 smoke, and they -- they classify it here as
23 carcinogenic.

24 Q. Do you agree that it's carcinogenic?

25 A. Yes, it's carcinogenic.

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1 Q. Did you write "agree" on there? I didn't see
2 what you wrote.
3 A. Yes.
4 Q. Okay. Formaldehyde, is that a carcinogenic
5 agent in undiluted sidestream cigarette smoke, sir?
6 A. That's an agent that's in sidestream smoke.
7 There is some question today about its
8 carcinogenicity, whether it actually is or not. It
9 is in laboratory animals, but there are questions
10 about whether it is in humans.
11 Q. Okay. You want to just --
12 Does "don't know" best describe your -- your
13 view of that?
14 A. I'm not sure what I'm agreeing to and
15 disagreeing to, the fact that formaldehyde is in
16 there, or the concentration, or --
17 Q. Well if --
18 A. -- sidestream smoke? What am I agreeing to?
19 Q. Well if formaldehyde is there, why don't you
20 agree to that and then put a little circle around C
21 for carcinogen and say you don't agree with that.
22 A. Okay.
23 Q. Okay? Why don't you write "unsure" next to the
24 C, then, on formaldehyde. Want to write "unsure"
25 next to the C?

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- 1 A. (Complying.)
- 2 Q. Three -- why don't you pronounce that for me,
- 3 sir.
- 4 A. 3-vinylpyridine.
- 5 Q. Is that present in undiluted cigarette smoke,
- 6 sir?
- 7 A. Yes, it is.
- 8 Q. Is it a suspected carcinogenic agent, a
- 9 carcinogen?
- 10 A. Yes. Well it depends on which organization you
- 11 talk with, but I think --
- 12 Q. How about you?
- 13 A. -- most of them would say that's a suspected
- 14 carcinogen.
- 15 Q. So why don't you just put "agree" on there.
- 16 Hydrogen cyanide, is that a toxic agent in
- 17 undiluted cigarette sidestream smoke, sir?
- 18 A. Yes.
- 19 Q. Want to just put "agree" next to that?
- 20 A. (Complying.)
- 21 Q. Did you do that?
- 22 A. Yes.
- 23 Q. Hydrazine, is that a carcinogenic agent in
- 24 undiluted cigarette sidestream smoke, sir?
- 25 A. Yes, that's a carcinogenic agent.

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- 1 Q. Why don't you just write "agree" next to that.
- 2 A. (Complying.)
- 3 Q. Did you write "agree" next to that?
- 4 A. Yes.
- 5 Q. Nitrogen oxides, sir, is that a toxic agent in
- 6 undiluted cigarette sidestream smoke?
- 7 A. Yes, there are nitrogen oxides.
- 8 Q. Why don't you pronounce the next one for me.
- 9 A. N-nitrosodimethylamine.
- 10 Q. Is that a carcinogenic agent in undiluted
- 11 sidestream smoke, sir?
- 12 A. Yes.
- 13 Q. Would you write "agree" next to that.
- 14 A. (Complying.)
- 15 Q. Why don't you pronounce the next one for me,
- 16 sir.
- 17 A. N-nitrosopyrrolidine.
- 18 Q. Is is that a carcinogenic agent in undiluted
- 19 cigarette sidestream smoke, sir?
- 20 A. I think --
- 21 I'm unsure on that at the concentrations they
- 22 are saying.
- 23 Q. Why don't you --
- 24 A. It is a material in mainstream smoke, probably
- 25 is in sidestream smoke, so I'd agree.

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1 Q. In the "Particulate phase," the next group, is
2 tar a carcinogenic agent in undiluted cigarette
3 sidestream smoke, sir?

4 A. I think the tar is --

5 I'm unsure as to whether that's carcinogenic or
6 not. Depends on how the studies are conducted.

7 Q. How do you mean it --

8 Why does it depend on how the studies are
9 conducted?

10 A. In skin-painting studies there are increases in
11 tumors from tar, in other types of studies there have
12 not been, so it -- it clearly is depending upon
13 the -- the laboratory animal model that's used.

14 Q. Well what do you think? Do you think that tar
15 is a carcinogenic agent in the sidestream cigarette
16 smoke? Your view.

17 A. I don't know.

18 Q. Okay. But you agree that tar is -- is present.

19 A. Oh, it's present.

20 Q. Okay. You're just not sure whether it's
21 carcinogenic or not; right?

22 A. No.

23 Q. Is that right?

24 A. That's correct. I'm not sure how to define
25 "carcinogenic" for that material.

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- 1 Q. Okay. Nicotine, is nicotine present in
2 undiluted cigarette sidestream smoke, sir?
- 3 A. Yes.
- 4 Q. Is it a toxic agent?
- 5 A. Yes.
- 6 Q. You agree with that; right?
- 7 Phenol, is that a tumor-promoter in undiluted
8 cigarette sidestream smoke, sir?
- 9 A. Yes.
- 10 Q. So would you write "agree" there.
- 11 A. (Complying.)
- 12 Q. Catechol, is that how that's pronounced?
- 13 A. Yeah, catechol.
- 14 Q. Is catechol present in undiluted sidestream
15 smoke, sir?
- 16 A. I believe so. I'm not sure of --
- 17 Q. Is that a carcinogenic agent?
- 18 A. -- the concentration.
- 19 It's not a direct-acting carcinogen. Catechol
20 is usually considered, as they're classified here, as
21 cocarcinogens; they have to act with something else.
- 22 Q. So do you agree it's a cocarcinogen?
- 23 A. It is in some studies.
- 24 Q. You agree with that then?
- 25 A. That's --

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1 That classification is all right.

2 Q. Okay. You say it's all right.

3 A. Yeah. It --

4 Q. So you --

5 A. These classifications of toxicity depend on how

6 you define what particular types of toxicity. For

7 example, we were talking about tar, and tar may be

8 positive in one animal model and negative in all the

9 rest. And so if you require two animal models to

10 define it as a carcinogen, then you would say it's

11 not a carcinogen. That's why I say it depends on how

12 it's defined.

13 Q. All right.

14 A. And cocarcinogen classifications are

15 particularly difficult because they require other

16 materials to be present at the same time, and we're

17 unsure sometimes how they work together.

18 Q. The next particulate phase is o- --

19 A. Toluidine.

20 Q. -- toluidine. Do you agree that's a

21 carcinogenic agent present in undiluted sidestream

22 smoke, sir?

23 A. Let's see. I think that's probably present.

24 It's present in -- in mainstream smoke; it's probably

25 present in sidestream.

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- 1 Q. So you agree with that?
- 2 A. It's a small concentration.
- 3 Yes.
- 4 Q. Perhaps you can pronounce the next one for me,
- 5 sir.
- 6 A. 2-naphtylamine.
- 7 Q. Is that a carcinogenic agent present in
- 8 undiluted cigarette sidestream smoke, sir?
- 9 A. Yes.
- 10 Q. Would you write "agree" there, please?
- 11 A. (Complying.)
- 12 Q. Have you pronounce the next one for me, please.
- 13 A. 4-aminobiphenyl.
- 14 Q. Is that a carcinogenic agent present in
- 15 undiluted cigarette sidestream smoke, sir?
- 16 A. Yes.
- 17 Q. If you'd write "agree" there, I'd appreciate it.
- 18 A. (Complying.)
- 19 Q. If you'd pronounce the next one for me.
- 20 A. Benz(a)anthracene.
- 21 Q. Is that a carcinogenic agent present in
- 22 undiluted sidestream smoke, sir?
- 23 A. Yes.
- 24 Q. And benzo(a)pyrene?
- 25 A. Yes.

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- 1 Q. Do you agree that that's a carcinogenic agent in
2 undiluted cigarette sidestream smoke, sir?
- 3 A. Yes.
- 4 Q. And quinoline, sir, is that a carcinogenic agent
5 present in undiluted cigarette sidestream smoke?
- 6 A. Yeah, I would say that's present.
- 7 Q. If you'd write "agree" there, I'd appreciate it.
- 8 A. (Complying.)
- 9 Q. The next one is NNN. Is that a carcinogenic
10 agent present in undiluted cigarette sidestream
11 smoke, sir?
- 12 A. I'm not sure. I'm not sure whether that's
13 present or not.
- 14 Q. Just write "unsure" then.
- 15 A. That's quite a reactive material, and it may --
16 Depends on the conditions that the sidestream
17 smoke was collected.
- 18 Q. NNK, is that a carcinogenic agent present in
19 undiluted cigarette sidestream smoke, sir?
- 20 A. I'm not sure the concentration to which that's
21 present.
- 22 Both of those, NNN and NNK, are very reactive.
23 It would depend on how it's collected.
- 24 Q. It might be present though.
- 25 A. And it might be present.

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- 1 Q. If you'd pronounce the next one for me, sir.
- 2 A. N-nitrosodiethanolamine.
- 3 Q. Do you agree that's present in undiluted
- 4 cigarette sidestream smoke, sir?
- 5 A. Yes.
- 6 Q. Write "agree." I'd appreciate it.
- 7 A. (Complying.)
- 8 Q. And cadmium, sir, is cadmium a carcinogenic
- 9 agent present in undiluted cigarette sidestream
- 10 smoke?
- 11 A. Yes.
- 12 Q. Write "agree" there, please.
- 13 A. (Complying.)
- 14 Q. And nickel, sir, is nickel a carcinogenic agent
- 15 present in undiluted cigarette sidestream smoke?
- 16 A. Both cadmium and nickel depend on what the
- 17 oxidation state is whether they're carcinogenic or
- 18 not. But I wouldn't be surprised if there are some
- 19 nickel compounds in sidestream smoke, so I would
- 20 agree with you.
- 21 Q. You agree?
- 22 A. Uh-huh.
- 23 Q. And polonium-210, sir, do you agree that that's
- 24 a carcinogenic agent that's present in undiluted
- 25 cigarette sidestream smoke?

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1 A. Yeah. Very small concentrations.

2 Q. Okay. We can put that --

3 Give that to the court reporter, if you would,
4 sir.

5 (Discussion off the record.)

6 (Plaintiffs' Exhibit 1403 was marked
7 for identification.)

8 BY MR. KAYSER:

9 Q. Doctor, I'm showing you what has been marked as
10 Plaintiffs' Exhibit 1403. That is page 91 from the
11 1989 Surgeon General's report, also Table 9 that's
12 entitled "Some toxic and tumorigenic agents in indoor
13 environments polluted by tobacco smoke." Do you see
14 that, sir?

15 A. Yes, I do.

16 Q. Have you seen that document and this table
17 before today, sir?

18 A. Yes. This is also out of the same publication,
19 the Hoffmann and Hecht (1989).

20 Q. And you're familiar with that publication?

21 A. Yes.

22 Q. Is that a toxicology publication, sir?

23 A. I don't remember which journal that was
24 published in or whether that was a separate
25 monograph, so I don't know the answer to that.

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- 1 Q. Do you know Hoffmann and Hecht?
- 2 A. I've met Hoffmann. I'm not sure about Hecht.
- 3 Q. What is --
- 4 Is Hoffmann a man or a woman?
- 5 A. It's a man.
- 6 Q. What is his area of expertise, sir?
- 7 A. I think he's trained as a pathologist, but I'm
- 8 not sure.
- 9 Q. You've also been trained as a pathologist, too;
- 10 is that right, sir?
- 11 A. Yes.
- 12 Q. Do you do autopsies?
- 13 A. I don't now.
- 14 Q. Have you done autopsies?
- 15 A. Yes.
- 16 Q. Have you done autopsies of smokers and
- 17 non-smokers?
- 18 A. Yes.
- 19 Q. Have you noticed the physical difference in
- 20 lungs between smokers and non-smokers?
- 21 A. Yes.
- 22 Q. Isn't that an animal model, such as it is?
- 23 A. No.
- 24 Q. Why not?
- 25 A. It's not a laboratory animal model. We're

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1 talking about human exposure, individual human
2 exposure. But laboratory animal models are conducted
3 under controlled exposures. An individual human
4 is -- doesn't constitute a laboratory animal model.

5 Q. Plaintiffs' Exhibit 1403, sir, Table 9, do you
6 agree that nitric oxide is a toxic and tumorigenic
7 agent that's in indoor environments polluted by
8 tobacco smoke?

9 A. Nitric oxide is found in a lot of environments,
10 especially restaurants, and can be produced by
11 several materials, so I'm not surprised that they
12 found it in restaurants, bars, cafeterias. I'm not
13 sure what kind of work rooms they were looking at,
14 but it's not unusual to find nitric oxides.

15 Q. But would not nitric oxide be present in an
16 indoor environment that's polluted by tobacco smoke,
17 sir?

18 A. It may be. I don't know.

19 Q. Why don't you just write "don't know" next to
20 that.

21 A. (Complying.)

22 Q. Doctor, is nitrogen dioxide a toxic and
23 tumorigenic agent that's present in indoor
24 environments polluted by tobacco smoke?

25 A. Nitrogen dioxide is -- is a gas which, again, is

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1 present, as a lot of the nitrogen compounds are like
2 nitric oxide, in various locations, so it's not
3 unusual to find it in -- like I say, I don't know
4 which work rooms they're talking about --
5 restaurants, bars and cafeterias, where there's food
6 cooked. And -- and you find nitrogen oxides in
7 normal atmospheres. So I'm not surprised that they
8 find it where people smoke, but they'd also find it
9 where people don't smoke.

10 Q. In the same concentrations?

11 A. I don't know.

12 Q. Then why don't you --

13 A. I haven't looked at those concentrations, one
14 versus the other one.

15 Q. All right. So why don't you put "don't know"
16 next there, or "unsure," whatever you're comfortable
17 with.

18 A. (Complying.)

19 Q. Hydrogen cyanide, is that a toxic or tumorigenic
20 agent in indoor environments polluted by tobacco
21 smoke, sir?

22 A. These are very low concentrations, but I
23 wouldn't be surprised to find hydrogen cyanide in
24 rooms where people have been smoking --

25 Q. So would you --

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1 A. -- at very low concentrations. We're talking
2 about eight to 122 micrograms per cubic meter of air,
3 and it's a very low concentration.

4 Q. So would you put "agree" next to that?

5 A. (Complying.)

6 Q. And benzene, sir, is benzene a toxic and
7 tumorigenic agent in an indoor environment of public
8 places polluted by tobacco smoke?

9 A. Well benzene is an agent that's commonly found
10 in -- in various environments.

11 Q. Is it in a public place, in a living room -- I'm
12 sorry -- in a public place that would be polluted by
13 tobacco smoke, sir?

14 A. It could be in places that have tobacco smoke,
15 it could be in places that don't have tobacco smoke.
16 Benzene is --

17 Although it's been limited in the environment in
18 the last few years, it's still found commonly. For
19 example, we're all exposed to benzene when we put
20 gasoline in our car.

21 Q. But --

22 A. So benzene is pretty common in a lot of
23 environments.

24 Q. Is benzene present in indoor environments
25 polluted by cigarette smoke, sir?

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- 1 A. Like I say, it could be.
- 2 Q. You don't know?
- 3 A. Well I haven't done the measurements myself.
- 4 Q. Well as an expert in the field of toxicology --
- 5 A. I mean I can accept the fact that it would be
- 6 present in -- in air. I wouldn't be surprised in
- 7 this room, if we analyzed the air, we'd find some
- 8 benzene.
- 9 Q. Let's talk about in public places where -- that
- 10 have been polluted by tobacco smoke. Would you agree
- 11 or disagree that benzene is present there, sir? Just
- 12 whatever you're comfortable with.
- 13 A. Well benzene is present in cigarettes. I'd
- 14 agree that it's present in public places.
- 15 Q. Polluted by cigarette smoke?
- 16 A. Polluted or not polluted by cigarette smoke.
- 17 Q. Would it be in higher concentrations if it was
- 18 polluted by cigarette smoke, sir?
- 19 A. It may be.
- 20 Q. Do you know?
- 21 A. Well, it adds to the concentration.
- 22 Q. Then would you agree with that statement or not
- 23 on Table 9 in Exhibit 1403?
- 24 A. I think what I'm agreeing to is that it's
- 25 present in indoor-air environments polluted by

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1 tobacco smoke. I don't have any problem with that.

2 I agree with that.

3 Q. Okay. Why don't you put "agree" then.

4 A. (Complying.)

5 Like I say, I don't know about any of these

6 concentrations, but --

7 I haven't done the measurements myself --

8 Q. I understand.

9 A. -- or reviewed these, but these are all very low
10 concentrations, and that's kind of what you would
11 expect to see.

12 Q. And formaldehyde, do you agree that formaldehyde
13 is a toxic and tumorigenic agent in living rooms
14 polluted by tobacco smoke, sir?

15 A. Well it's the same situation as benzene.
16 Formaldehyde is present in almost all environments at
17 some concentration. It's present in this room.

18 Q. If --

19 A. It's used in building materials to a very
20 limited extent. So I wouldn't be surprised to find
21 it in areas where people had been smoking because we
22 know it's in sidestream smoke.

23 Q. If somebody was smoking in this room right now,
24 would we have an increased concentration of
25 formaldehyde as a result of that cigarette smoking?

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- 1 A. It -- it would probably increase.
- 2 Q. Okay. So do you agree with that statement?
- 3 A. Yes.
- 4 Q. The next one is acrolein.
- 5 A. Yes, acrolein.
- 6 Q. Is that a toxic or tumorigenic agent that's
- 7 present in indoor environments polluted by tobacco
- 8 smoke?
- 9 A. We know that acrolein is produced by anything
- 10 that's burning, so you would -- I would expect to see
- 11 some present in an area where people have been
- 12 smoking.
- 13 Q. So would you agree with this then?
- 14 A. Yes.
- 15 Q. Acetone, sir, do you agree that acetone is a
- 16 tumor -- toxic and tumorigenic agent present in
- 17 indoor environments polluted by tobacco smoke?
- 18 A. Well acetone is a solvent that's not very toxic
- 19 generally, and it's -- it's found in fairly high
- 20 concentrations in most public places whether people
- 21 are smoking or not. As you can see, the
- 22 concentrations for acetone are higher, and that's
- 23 because there are a lot of sources of acetone in the
- 24 environment.
- 25 Q. Would you expect to find higher concentrations

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1 of acetone in places where people are smoking, sir,
2 because of the cigarette smoke?

3 A. I'm unsure about that. There's already quite a
4 bit available. I'm not sure that the cigarette smoke
5 would even add very much to what's already available.

6 Q. So you disagree with that; is that right, sir?

7 A. I just don't know.

8 Q. All right.

9 A. I'm not sure.

10 Q. All right. Why don't you write "unsure" then.

11 A. (Complying.)

12 Q. Do you agree or disagree that acetone is a toxic
13 agent, sir?

14 A. Well at high concentrations acetone could be
15 toxic, just as table salt or water can be toxic at
16 high concentrations. Acetone is one of the -- the
17 least toxic solvents that's used in industry, so it's
18 not considered a very toxic material.

19 Q. All right. Phenols (volatile), do you agree
20 that those are toxic or tumorigenic agents in indoor
21 environments polluted by cigarette smoke, sir?

22 A. Well these are coffee houses. I don't know.
23 Coffee itself has phenols in it, and so they would --
24 In coffee houses, I wouldn't be surprised even
25 when people are not smoking to find phenols.

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1 Q. Would those phenols, the concentrations of those
2 phenols be increased by people smoking?

3 A. It may be, but I'm unsure as to how much it
4 would add.

5 Q. Why don't you write down "unsure" then, sir.

6 A. (Complying.)

7 Q. Would you pronounce the next one for me? I'd
8 appreciate it.

9 A. N-nitrosodimethylamine.

10 Q. Is that a toxic and tumorigenic agent in indoor
11 environments polluted by tobacco smoke, sir?

12 A. Well we show a range here from zero to 240,
13 which means that it may not be present or it may be
14 present.

15 Q. What's your best answer for that, sir, agree or
16 disagree or not sure?

17 A. Well the N-nitroso compounds are quite reactive,
18 too, and this is fairly low concentration. There's
19 other forces -- sources of N-nitroso compounds. I
20 think at best I would just have to say I'm unsure.

21 Q. Well then just write "unsure."

22 A. (Complying.)

23 Q. And why don't you pronounce the next one for me,
24 sir.

25 A. N-nitrosodiethylamine.

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1 Q. Is that a toxic or tumorigenic agent that's
2 present in indoor environments polluted by tobacco
3 smoke?

4 A. Well as I indicated with N-nitrosodimethylamine,
5 diethylamine is the same situation.

6 Q. So you're unsure?

7 A. I'm unsure because of the concentrations of zero
8 to 200, which means some didn't have any.

9 Q. So why don't you just put down "unsure."

10 A. Okay.

11 Q. Do you want to write down "unsure?"

12 A. Yes, I do.

13 Q. Okay. Nicotine, is nicotine a toxic or
14 tumorigenic agent in indoor environments polluted by
15 tobacco smoke, sir?

16 A. You would expect to find nicotine in areas where
17 people were smoking.

18 Q. So you agree with that, sir?

19 A. I don't know about the concentrations, but I'm
20 not surprised, so I'd agree.

21 Q. Okay. Benzo(a)pyrene, sir, is that a toxic or
22 tumorigenic agent in indoor environments polluted by
23 tobacco smoke?

24 A. Found in public places. Well you find
25 benzo(a)pyrene in restaurants because cooking is

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1 going on. Benzo(a)pyrene is formed in cooking as
2 well.

3 Q. Would there be increased concentrations of
4 benzo(a)pyrene where there is cigarette smoke, sir,
5 as a result of that cigarette smoke?

6 A. Yes, I'd agree with that.

7 Q. Okay.

8 A. I don't know the extent to which they would
9 increase, but there -- we do know that there is some
10 that's released.

11 My pen just ran out of ink.

12 Q. I have confidence that the Dorsey firm can find
13 you another pen.

14 A. I didn't bring any refill.

15 Q. Doctor, I want to show you an exhibit that has
16 been previously marked as Plaintiffs' Exhibit 3319.

17 MR. KAYSER: Can we go off the record for a
18 moment.

19 (Discussion off the record.)

20 BY MR. KAYSER:

21 Q. Doctor, I am showing you what has been
22 previously marked as Plaintiffs' Exhibit 3319 in this
23 action, which is page 12 from the 1989 Surgeon
24 General's report. You see that on page 12 the
25 Surgeon General in 1989 says that, quote, "Cigarette

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1 smoking is a major cause of cerebrovascular disease,
2 parens, stroke, close parens, the third leading cause
3 of death in the United States," period, end quote.

4 Do you agree with that statement, sir?

5 A. He's using a very broad definition of "cause,"
6 what I would call a public health definition of
7 "cause." From a scientific standpoint I wouldn't
8 agree with that, based on the epidemiologic studies.
9 I mean that's a definition that he has selected to --
10 to use for this.

11 Q. So you think that the word "cause" is
12 scientifically inappropriate?

13 A. That's not a --

14 It's a public health definition, it's not a
15 scientific definition.

16 Q. What's the difference between a public health
17 definition and a scientific definition, sir?

18 A. Well like I say, "cause" can be used in many
19 different ways, it's a very broad term, and the
20 Surgeon General here is making a public health
21 statement to try to reduce disease within the
22 community that he has responsibility for, in this
23 case the United States, and based on the
24 epidemiologic studies he has seen an increase in
25 cardiovascular disease in those that smoke, and so

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1 that is how he has defining "cause," based on the
2 increased relative risk of cardiovascular disease in
3 these who smoke.

4 Q. Do you think that the Surgeon General is lying
5 to the American people when he says that cigarette
6 smoking is a major cause of stroke?

7 A. No, I don't think he's lying. I think he's
8 using the word "cause" differently than scientists
9 use it. I haven't -- have not seen a laboratory
10 animal model, and I don't think the mechanisms are
11 known for cardiovascular disease as it may be related
12 to smoking. There's certainly a statistical
13 association that's been seen in the studies, and I
14 think he is well within his responsibility to convey
15 that to the American public, which is what he's
16 doing.

17 Q. What --

18 A. And he's trying to use as clear a language as he
19 can.

20 Q. Just on a personal basis, doctor, do you believe
21 that cigarette smoking is a major cause of stroke?

22 A. I'm --

23 Like I say, I don't separate professional from
24 personal. I've looked at some of these studies
25 before and I see a statistical increase.

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1 Q. A statistical increase in what?

2 A. In the extent of cardiovascular disease in
3 people that smoke.

4 Q. Do you believe that cigarette smoking causes
5 stroke -- is a major cause of stroke?

6 A. I don't know. From a scientific standpoint, I
7 don't know.

8 Q. Do you believe --

9 A. Like I say, I -- in looking at the epidemiologic
10 studies, there's clearly an increased risk of
11 cardiovascular disease.

12 Q. Do you know of any epidemiological study in the
13 last 25 years that concludes that cigarette smoking
14 is not a cause of stroke?

15 MR. RYERSON: Objection as to form.

16 MR. KAYSER: I'll try to cure it if you
17 tell me where the form is inappropriate.

18 MR. RYERSON: It's the use of the word
19 "cause" and resulting from any epidemiologic study.

20 MR. KAYSER: You can go ahead.

21 A. I'm not sure I even understand your question.
22 If you can repeat it.

23 Q. Okay. Do you know of any epidemiological study
24 in the last 25 years that concludes that cigarette
25 smoking is not a cause of stroke, major cause of

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1 strokes?

2 A. Epidemiologic studies deal with -- with relative
3 risk. They're statistical studies that are used to
4 develop statistical associations. They don't deal
5 with cause. So I don't know how to answer your
6 question.

7 Q. You're unable to answer my question.

8 A. I don't understand your question.

9 Q. Okay.

10 A. You're using "cause" in a way that is -- it is
11 generally not used in epidemiology.

12 Q. Well the Surgeon General has as a basis for the
13 conclusion on page 12 of Exhibit 3319 that cigarette
14 smoking is a major cause of stroke; isn't that right?

15 A. That's the -- the public health pronouncement
16 that he has made.

17 Q. Well would you also agree, doctor, that there
18 are a number of reputable scientists, toxicologists,
19 that believe that cigarette smoking is a cause of
20 stroke?

21 A. I can't speak for other scientists, but I know
22 those that have looked at cause -- and that's what
23 toxicologists do, we study mechanisms of disease --
24 would not, based on a set of epidemiologic studies,
25 agree with the statement. Now that doesn't mean that

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1 the Surgeon General is not trying to convey public
2 health information, and as I indicated, it appears
3 that he is using "cause" to try to convey to the
4 public that there is an increased risk associated in
5 people that smoke for cardiovascular disease.

6 Q. Well I read the statement on page 12 of Exhibit
7 3319 to be pretty declarative, that cigarette smoking
8 is a major cause of stroke. Now do you think that
9 the Surgeon General is misleading the American people
10 when he says that in a report?

11 A. I think the Surgeon General is trying to fulfill
12 his responsibility to convey to the public when he
13 has concerns for public health, and I think he is
14 well within his -- his authority to do so.

15 Q. But do you believe --

16 A. He has come to a conclusion, which is -- and
17 stated it in a very direct way, to try to convey that
18 information to the public, and I don't have a problem
19 with him conveying information to the public that
20 would protect public health.

21 Q. But do you --

22 A. But as I indicated, the way he has defined
23 "cause" in that statement is different than the way
24 scientists would define it.

25 Q. All scientists?

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1 A. Scientists that would be involved in laboratory
2 animal studies or in trying to understand mechanisms
3 of disease.

4 Q. Well you read the Surgeon General --

5 You've been involved in cancer, lung cancer
6 issues for 20 years, you have a special expertise in
7 carcinogens, and you read the 1989 Surgeon General's
8 report. Have you read other Surgeon General's
9 reports, doctor?

10 A. Yes, I have.

11 Q. And have you read the individuals that have been
12 on the panels that have come to those conclusions?

13 A. I have read the Surgeon General's reports,
14 including the landmark report in 1964, and I believe
15 in fact those reports draw the same distinction that
16 I have indicated here. And that within those
17 reports, for example, in 1964 report, the Surgeon
18 General indicated that they were not using "cause" in
19 the strict sense of the word, and that's the same way
20 I use it as a scientist.

21 Q. Do you agree with the way they are using "cause"
22 in the 1989 report? Are you comfortable with the way
23 they are using "cause" in that report?

24 A. Well I -- I'm not comfortable with the way a lot
25 of people use "cause" because I think it leads to

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1 some confusion, but I understand the difficulty in
2 trying to convey complicated scientific information
3 to the public in a way that you can convince the
4 public to change behavior, and that's what he's
5 trying to do. So --

6 Q. You think the Surgeon General --

7 A. -- even though I'm uncomfortable with the way he
8 uses "cause," I'm not uncomfortable with the fact
9 that he's trying to convince people to change their
10 habits.

11 Q. If somebody came to you and said, "Doctor, I'm a
12 smoker," a close friend of yours, and you're a
13 toxicologist that's been involved in this business
14 for as many years as you have, "and I don't know
15 whether there are any health risks from my smoking."
16 Would you advise that person to give up smoking
17 because of the health risks involved?

18 A. I would explain to the person that that's a risk
19 factor in their living, that epidemiologic studies
20 have been conducted which show that it's a risk
21 factor, and that to reduce his risks, which are
22 statistical, that he should reduce his -- reduce or
23 eliminate his smoking.

24 Because they are statistical, we don't know what
25 would happen to that individual. That individual may

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1 live to a ripe old age and smoke every day of his
2 life. But from a statistical standpoint, it's the
3 same thing that we do on, say, cardiovascular
4 disease, which is, you know, we're talking about
5 cerebrovascular, cardiovascular disease, if a person
6 comes to you and wants to improve their health
7 status, you look at the relative risks for the
8 different materials that they eat in their diet and
9 so forth and you ask them to, say, reduce the amount
10 of fat, get more exercise, reduce or eliminate
11 smoking. These are all statistical risk factors.
12 Now whether that's going to improve that individual's
13 health, we don't know.

14 Q. But if that individual came to you and said that
15 he doesn't get much exercise, has kind of a high-fat
16 diet and smokes two packs of cigarettes a day, he's
17 going to -- he wants to eliminate one but not all,
18 which would you tell him to eliminate, tobacco,
19 high-fat diet, or tell him to get more exercise?

20 A. That would be very difficult and it would depend
21 on the circumstances. For one thing, I'm not a
22 physician. I don't practice.

23 Q. But you are a toxicologist who's been involved
24 in these issues for more than 20 years, doctor.

25 A. That's correct.

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1 Q. Don't you think that cigarette smoking is the
2 greatest risk factor?

3 A. It's certainly one of the largest. It's a major
4 risk factor.

5 Q. Do you know of a risk factor that is more
6 significant than tobacco smoking?

7 A. Well depends on which disease we're talking
8 about, too.

9 Q. Let's take lung cancer.

10 A. Okay.

11 Q. Is cigarette smoking the greatest risk factor in
12 lung cancer?

13 A. I think that's the greatest risk factor for lung
14 cancer.

15 Q. Is cigarette smoking the greatest risk factor
16 for stroke?

17 A. I'm not sure. There are other risk factors for
18 stroke that are pretty high as well.

19 Q. What's higher than -- what's --

20 What's a higher risk factor in stroke than
21 cigarette smoking, sir?

22 A. Family history is a very high risk factor for
23 stroke as well.

24 Q. Can't do anything about family history; can you?

25 A. Well that's not true either. You can do things

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1 about family history. If you know a person is
2 predisposed to a certain disease, you can take
3 preventative measures to try to reduce their risks
4 for developing that disease if you know that that's
5 in the family history for that. That's the basis,
6 actually, for a lot of preventative treatment these
7 days.

8 Q. But then that's treatment that has to be done;
9 isn't that right? I mean you have to take a pill or
10 you have to do something. But the family history,
11 we're all born with our family history; aren't we?

12 A. Well yeah. When we step on this earth, we are
13 born with a makeup.

14 Q. Let's talk about things over which we have
15 control. We don't have any control over our family
16 history.

17 We can do something in response to our family
18 history. Would you agree with that?

19 A. We can so something in response to the knowledge
20 of family history.

21 Q. But --

22 A. For example, if a person is born with -- I'll
23 just pick an example -- Berry aneurysm, which is
24 within the brain on the blood vessel, is a weak place
25 in the blood vessel which tends to expand, and if you

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1 know that the father died of it, the grandfather died
2 of a Berry aneurysm, then there are certain things
3 that you would have that person do; for example, keep
4 their blood pressure down, continue to get CAT scans
5 on a regular basis and so forth, to try to reduce
6 that.

7 Q. No, I understand all of that, doctor.

8 A. Okay.

9 Q. I'm talking about things over which we have
10 control, not --

11 Family history, what you're talking about is
12 what you do in response to your family history, and
13 those are all things that you can do. But let's talk
14 about risk factors.

15 Before we do that, we're going to go back to
16 Exhibit 3319. In the second bullet there it says,
17 quote, "By 1986, lung cancer caught up with breast
18 cancer as the leading cause of death in women." And
19 it says that "Women smokers' relative risk of lung
20 cancer has increased by a factor of more than four
21 since the early 1960s...."

22 Do you agree with that, sir?

23 MR. RYERSON: Objection -- excuse me,
24 objection as to form. I think you left a word out in
25 reading that quote.

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1 MR. KAYSER: I did?

2 MR. RYERSON: You said "leading cause of
3 death" I thought, as opposed to "leading cause of
4 cancer death."

5 MR. KAYSER: I'm sorry. Let me read it
6 over again. I apologize.

7 Q. Second bullet point says, "By 1986, lung cancer
8 caught up with breast cancer as the leading cause of
9 cancer death in women. Women smokers' relative risk
10 of lung cancer has increased by a factor of four
11 since the early 1960s and is now comparable to the
12 relative risk identified for men in that earlier
13 period," unquote.

14 Do you agree with that statement, sir?

15 A. I think the statement, particularly the second
16 sentence, uses some of the same type of words that I
17 would use. Rather than use "cause" as is used in the
18 first sentence, I prefer the word that's used in the
19 second sentence where it talks about "women smokers'
20 relative risk of lung cancer has increased."

21 Q. And you agree with --

22 A. They're talking about relative risk, and --

23 Q. Do you agree that women smokers' relative risk
24 of lung cancer has increased by a factor of more than
25 four since the early 1960s?

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1 A. I think the epidemiology -- epidemiologic
2 studies show that it's by a factor of more than
3 four. I don't know the exact number. I'd have to
4 look at the data that they're referring to. But as a
5 general statement, we have seen an increase in
6 relative risk of lung cancer in women, increase over
7 those time periods.

8 Q. Drop down a couple where -- where it says, "To
9 date, 43 chemicals in tobacco smoke have been
10 determined to be carcinogenic."

11 A. Carcinogenic.

12 Q. Carcinogenic.

13 Do you agree with that, sir?

14 A. I'd agree that there is at least 43 substances
15 that have some carcinogenic potential, depending on
16 how you define "carcinogenic."

17 Q. As you define "carcinogenic," sir, do you agree
18 that there are 43 chemicals in tobacco smoke that are
19 carcinogenic?

20 A. Well I define "carcinogenic" differently based
21 on different advisory boards or panels that I would
22 serve on, whether I'm working on an advisory panel to
23 the Food and Drug Administration or to EPA or to the
24 World Health Organization. Each one would define
25 "carcinogenic" somewhat differently, so it would be

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1 based on that.

2 Like I say, depending on how a person defines
3 "carcinogenic," there's certainly carcinogenic
4 potential in 43 chemicals --

5 Q. In tobacco smoke?

6 A. -- in tobacco smoke.

7 MR. KAYSER: Have the court reporter mark
8 this as Exhibit 1404.

9 (Plaintiffs' Exhibit 1404 was marked
10 for identification.)

11 BY MR. KAYSER:

12 Q. Sir, Plaintiffs' Exhibit 1404 is Roman numeral
13 XIII of the 1990 Surgeon General's report. As you
14 can see, Jonathan Samet is the senior scientific
15 editor of the 1990 Surgeon General's report. Do you
16 see that, sir?

17 A. Yes.

18 Q. You know Dr. Samet don't you, sir?

19 A. Yes, I do.

20 Q. I believe in your report you -- on page five of
21 your report, which is Exhibit 1401, you talk about
22 your previous work with Dr. Samet. I'm in the last
23 paragraph, page five of your report. You highly
24 respect his professional competence in epidemiology.
25 Do you still highly respect Dr. Samet's professional

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1 competence in epidemiology?

2 A. Yes.

3 Q. Would you consider Dr. Samet to be one of the
4 leading epidemiologists in the United States today,
5 sir?

6 A. He's a leading epidemiologist.

7 Q. He enjoys a great deal of respect in his field
8 of expertise?

9 A. Yes.

10 Q. And as the senior scientific editor of the 1990
11 Surgeon General's report, he has the overall
12 responsibility for its quality and its accuracy; is
13 that right, sir?

14 A. I'm not sure how this was set up, but I would
15 assume since Dr. Samet's been identified as the
16 senior scientific editor, usually within a journal
17 that means that they have overall responsibility for
18 the content.

19 Q. And the quality and the accuracy of the 1990
20 report, wouldn't that be Dr. Samet's
21 responsibility --

22 Let me ask you the question again. Wouldn't Dr.
23 Samet have the overall responsibility for the quality
24 and the accuracy of the 1990 Surgeon General's
25 report, sir?

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- 1 A. Yes.
- 2 Q. As you look down the list of the other
- 3 individuals, men and women who were the scientific
- 4 editors of the report, do you know any of those
- 5 folks, sir?
- 6 A. I know some of them. I've met some of them.
- 7 Q. Are each of the individuals who are listed as
- 8 the scientific editors of that report reputable and
- 9 leading people in their particular fields?
- 10 A. The ones that I know are.
- 11 Q. And who are those, sir?
- 12 A. Dr. Davis; Walter Willett, Dr. Willett; I
- 13 believe I've met two of the others as well.
- 14 Q. Who is that?
- 15 A. Judith Ockene; and Dianna Petitti, I believe
- 16 I've met her as well. She's at UC-San Francisco.
- 17 Q. And again, these are all people who are leaders
- 18 in their respected fields, sir?
- 19 A. Yes.
- 20 Q. Well if you were the scientific editor of a
- 21 particular report, you would be concerned about the
- 22 quality and the accuracy of the report with which
- 23 your name is associated; wouldn't you, sir?
- 24 A. Yes.
- 25 Q. And you would be proud when the report was

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1 finally published?

2 A. Yes.

3 MR. KAYSER: We have been at it for an hour
4 plus. Take a break?

5 MR. RYERSON: Short one.

6 (Recess taken.)

7 BY MR. KAYSER:

8 Q. Doctor, I am showing you what has been
9 previously marked in this deposition as Plaintiffs'
10 Exhibit 3321, which, as you can see, is page Roman
11 numeral V from the 1990 Surgeon General's report.

12 A. Yes.

13 Q. If you'll drop down to "Overall Benefits of
14 Smoking Cessation, it says, and I quote, "People who
15 smoke" -- strike that.

16 Quote, "People who quit smoking live longer than
17 those who continue to smoke," period, end quote.

18 Do you agree with that statement, sir?

19 A. I think, based on the epidemiologic data that we
20 have to date, that -- and again these are population
21 studies, but there is a drop in the relative risk as
22 people stop smoking, so you would expect a population
23 to generally live longer.

24 Q. You would expect the population to generally
25 live longer if what?

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1 A. If they stopped smoking. It's based on the
2 epidemiologic studies and what happens after, as they
3 use, smoking cessation.

4 Q. Just from your own view, doctor, knowing what
5 you know as a person who's been in this area for 20
6 plus years, do you believe that people who quit
7 smoking live longer than those who continue to smoke?

8 A. Yeah. As a population, that's true.

9 Q. Doctor, I'm showing you what --
10 I'm showing you what's previously -- been
11 previously marked in these depositions as Exhibit
12 3323, which, as you can see, is --

13 A. This is 332?

14 Q. 3323.

15 A. Oh, okay.

16 Q. I'm sorry. Did I not mark that?

17 A. Yeah. I just wanted to make sure we were --

18 Q. Oh, I'm sorry.

19 A. -- talking from the same --

20 Q. Yeah, we are. Left out a number there.

21 I'm showing you what has been marked as
22 Plaintiffs' Exhibit 3323, which is page Roman numeral
23 XI of the 1990 Surgeon General's report for which Dr.
24 Samet was the senior scientific editor.

25 Have you drop down about five lines. You'll see

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1 that there's the conclusion, quote, "Based on these
2 criteria, previous reports have recognized a causal
3 association between smoking and cancers of the lung,
4 larynx, esophagus, and oral cavity; heart disease;
5 stroke; peripheral artery occlusive disease; chronic
6 obstructive pulmonary disease; and intrauterine
7 growth retardation."

8 Do you agree that there is a causal association
9 between cigarette smoking and those diseases that are
10 listed there in the Surgeon General's report?

11 A. Well I don't like the use of "causal." Like I
12 say, I think that's confusing. We talked about that
13 previously. I would change "causal" to "statistical
14 association" between those.

15 Q. So you think that Dr. Samet is guilty of --

16 MR. RYERSON: Excuse me.

17 A. If I can finish.

18 Q. I'm sorry.

19 A. This is part of the conclusions of the report.
20 This is meant to be a general summary of what they
21 believe the report conveys to the public, and this is
22 information that's being conveyed to the public. But
23 like I say, I think as a scientist that I would
24 prefer to see that as a "statistical association"
25 rather than "causal," just because I think that's a

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1 very broad use of "causal."

2 Q. But those senior --

3 Those scientific editors that we looked at in a
4 previous exhibit have used the word "causal." Are
5 they guilty of sloppy language in your view?

6 A. I think they took their responsibilities
7 seriously and -- and are trying to convey this
8 information to the public in terms that the public
9 will understand. They are not using "causal" the
10 same way as scientists would, but I think -- I've
11 read through the report -- they've done a good job in
12 putting this material together.

13 Q. These are all scientists --

14 What you're telling me, then, if I understand
15 you, am I correct, sir, that these scientists are
16 using "causal" in a way that scientists normally
17 don't use the word "causal?"

18 A. What I'm telling you is that this report is a
19 report from the Surgeon General dealing with public
20 health benefits of smoking cessation, and that they
21 are using "cause" in here from a public health
22 standpoint.

23 As I indicated earlier when we talked about the
24 people that had written the report, that was the
25 charge that they were given, was to write this report

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1 for the Surgeon General to try to protect public
2 health, so they're using it in a public health
3 format, not in a scientific format.

4 Q. But do you believe that the word "causal" used
5 by these scientists is sloppy language?

6 A. Like I say, it can be used a lot of different
7 ways, and they have used it in what I guess I could
8 call a public health definition, not a scientific
9 definition.

10 In fact, as you see early in that page, they're
11 referring to the Surgeon General's report from 1964,
12 which I think drew a clear distinction between the
13 way "cause" is being used here and the way scientists
14 use "cause." They're not using it in the strict
15 sense of the word.

16 Q. Do you believe it's misleading, the way they use
17 it here in this exhibit?

18 A. I don't believe they're trying to mislead the
19 public; I think they're trying to inform the public.

20 Q. And do you think that they are legitimately
21 informing the public when they use the word in that
22 fashion -- the word "cause" in that fashion?

23 A. I think as public health officials they can use
24 terminology, whatever way they would, that would
25 convey the information to the public that would help

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1 protect public health, and that's the purpose of the
2 report.

3 Q. And do you believe that's --

4 A. So they -- they are justified, I believe, in
5 those types of definitions for their charge. As I
6 indicated, "cause" can be used in a lot of different
7 ways.

8 (Plaintiffs' Exhibit 1405 was marked
9 for identification.)

10 BY MR. KAYSER:

11 Q. Doctor, I'm showing you what has been marked as
12 Plaintiffs' Exhibit 1405 from the 1990 Surgeon
13 General's report.

14 Do you see where, on page -- page 131, speaking
15 of laryngeal cancer, first line says, quote, "Smoking
16 has been firmly established as a cause of laryngeal
17 cancer..." period, unquote? Do you agree with that
18 statement, sir?

19 A. Well finish the quote, it says, "...has been
20 firmly established as a cause of laryngeal
21 cancer...based on numerous epidemiologic studies."

22 Q. Right.

23 A. I think we've talked about the use of
24 epidemiologic studies, and they're using "cause" as
25 causal inference, which is a term that's used in

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1 epidemiology to -- causal inference or causal
2 hypothesis, and they're saying that clearly from
3 several epidemiologic studies there is a causal
4 inference or a statistical association.

5 Q. Based on your 20 years of working in the field
6 of cancer research, doctor, do you believe that
7 smoking is a cause of -- has been established as a
8 cause of laryngeal cancer?

9 A. From the scientific standpoint, we do not have
10 an animal model for laryngeal cancer. There have
11 been some proposed, but they have not been very
12 useful models. I think work is still going on in
13 that area. What I have seen, though -- I have seen
14 the epidemiologic studies which show increased risk
15 for laryngeal cancer in people who smoke.

16 Q. Well just from a --

17 I want to know what you believe, not what the
18 studies show or what you've read, but what you
19 believe. Do you believe that smoking is a cause of
20 laryngeal cancer?

21 A. Well I think I answered that. The laboratory
22 animal studies do not show it, so from a scientific
23 standpoint we don't know -- do not know what the --
24 what the mechanism is for laryngeal cancer or how
25 smoking may be one of the factors that leads to

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1 laryngeal cancer. But that doesn't say, as they have
2 said here, that the epidemiologic studies --

3 There have been numerous epidemiologic studies
4 that show statistical association.

5 Q. Well the 1990 Surgeon General's report that Dr.
6 Samet was the senior scientific editor on talks about
7 a cause of laryngeal cancer based on the numerous
8 epidemiologic studies. Do you think that Dr. Samet
9 and the other experts there are guilty of sloppy
10 language?

11 A. All I'm saying is that they have not used
12 "cause" the same way we have in science, and -- and
13 I think he makes it clear when he says "based on
14 numerous epidemiologic studies," he's talking about
15 the epidemiologic support for this.

16 Q. Is there some doubt in your mind, doctor, that
17 smoking is a cause of laryngeal cancer?

18 A. I don't know the mechanism of laryngeal cancer.
19 I don't know to what extent smoking increases the
20 risk of laryngeal cancer. I've seen the same
21 epidemiologic studies which show an increase in
22 laryngeal cancer, but I don't know what the mechanism
23 is.

24 Q. Is there any doubt --

25 A. So --

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1 Q. Just is there any doubt in your mind that
2 smoking is a cause of laryngeal cancer?

3 A. I don't --

4 I don't understand what you mean by that
5 question. I think I've answered the question. I
6 think from a scientific standpoint we don't have a
7 model. Within my mind, I don't know what -- how it
8 contributes to laryngeal cancer.

9 Q. Do you believe that smoking contributes to
10 laryngeal cancer even if you don't know how?

11 A. I think it increases the risk for people that
12 smoke.

13 Q. People who smoke are --

14 A. So it's -- I mean it's --

15 There are increased risks for people that smoke.

16 Q. For laryngeal cancer?

17 A. For laryngeal cancer. That's what the
18 epidemiologic studies show.

19 Q. Do you believe that? Do you believe those --

20 A. I think there have been several studies where I
21 think that's true based on those studies.

22 MR. RYERSON: Could we go off the record
23 for one second?

24 (Discussion off the record.)

25 (Plaintiffs' Exhibit 1406 was marked

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1 for identification.)

2 BY MR. KAYSER:

3 Q. Doctor, I'm showing you what has been marked as
4 Plaintiffs' Exhibit 1406, which is page 152 of the
5 1990 Surgeon General's report. And as you can see,
6 under "Esophageal Cancer," it says, quote, "Smoking
7 is a major cause of esophageal cancer....," period,
8 unquote.

9 Do you agree with that statement, sir?

10 A. Like I say, it's the same as the previous one.
11 This is based on statistical information from
12 epidemiologic studies. We don't have a model for
13 esophageal cancer to know what the mechanism is, so
14 it depends on the way "cause" --

15 It's certainly a risk factor. Smoking is a risk
16 factor for esophageal cancer.

17 Q. When you say "smoking is a risk factor," do you
18 mean that a cigarette smoker has an increased risk of
19 getting esophageal cancer --

20 A. Yes.

21 Q. -- over a non-smoker?

22 A. The population does. We don't know about
23 individual smokers, but certainly a group of people
24 that smoke, we will see an increase in esophageal
25 cancer.

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1 If you look at the second sentence, "In the
2 United States, the proportion of esophageal cancer
3 deaths attributable to tobacco has been estimated to
4 be 78 percent for men and 75 percent for women...",
5 again these are statistical calculations based on a
6 large population.

7 Q. So it's kind of like Russian roulette when you
8 smoke; is that it, doctor?

9 A. Well life is like Russian roulette.

10 Q. Well let's talk about smoking.

11 A. When we get in a car --

12 There are a lot of risks in life, and --

13 Q. Do you --

14 A. -- and I --

15 MR. RYERSON: Excuse me.

16 A. There are a lot of risks in life, and I think
17 most of us try to reduce those risks as much as we
18 can with the hope that that will have an impact in
19 improving both the length and quality of life that
20 we're living.

21 Q. Do you compare the risk of getting in a car with
22 the risk of smoking, sir? Is that what you are
23 telling us?

24 A. No.

25 Q. The risk of smoking is a --

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1 The risk of adverse effects to your health are a
2 heck of a lot higher with smoking than they are
3 getting in a car; aren't they, doctor?

4 A. Actually, probably the risks of mortality from
5 driving are higher than they are from smoking.

6 Q. You believe that?

7 A. I'd have to go back and look. I'm not sure.

8 But the risks of mortality -- or certainly the risks
9 of accidents of driving and morbidity during driving
10 are quite high, so --

11 Q. Higher than smoking, sir?

12 A. They probably are. Risks of driving are quite
13 high.

14 I did a report several years ago called Injury
15 in America that ranked a lot of the relative risks,
16 and we included such things as driving and various
17 exercises and high fat in the diet and smoking and so
18 forth, and they all have relative risk factors.

19 Q. Where is that report, doctor?

20 A. It was a report published by the National
21 Academy of Sciences.

22 Q. What year?

23 A. It's called Injury in America. It's listed in
24 my --

25 Q. What --

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1 A. -- curriculum vitae.

2 Q. I'll go find it.

3 What's the name of the article?

4 A. It's called Injury in America.

5 A lot of people do not understand that driving
6 cars -- driving a car is a relatively risky business.

7 Q. Doctor, I'm showing you what has been previously
8 marked as Exhibit 3322 in this litigation. If you'd
9 take a look at that, sir.

10 Exhibit 3322 is page Roman numeral VI of the
11 1990 Surgeon General's report, and if you drop down,
12 the third full paragraph, it says, and I quote,
13 "Cigarette smoking is the major cause of chronic
14 obstructive pulmonary disease, parens, COPD, close
15 parens, the fifth leading cause of death in the
16 United States."

17 Do you agree with that statement, sir?

18 A. Well again it uses "cause" differently than I
19 would use it. It's using it in a public health
20 manner. And again, these are based on --

21 COPD is a group of -- of diseases, lung
22 diseases; stands for chronic obstructive pulmonary
23 disease. They actually have it listed here.

24 Statistically, they have compared it with other
25 diseases and they say that it's the fifth leading

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1 cause of death in the United States. So I think,
2 based on whatever comparison they made, that may or
3 may not be accurate.

4 Q. Do you believe --

5 A. Depends on the data.

6 Q. Do you believe that cigarette smoking is the
7 major cause of COPD?

8 A. For one thing, like I say, they're using "cause"
9 differently. It's --

10 Cigarette smoking is certainly a risk factor for
11 COPD.

12 Q. Is cigarette smoking a significant risk factor
13 for COPD, sir?

14 A. Yes, it is.

15 Q. If people stop smoking, their risk of developing
16 COPD would decrease; wouldn't it, sir?

17 A. Yes.

18 MR. KAYSER: Have the reporter mark this as
19 Exhibit 1407, please.

20 (Plaintiffs' Exhibit 1407 was marked
21 for identification.)

22 BY MR. KAYSER:

23 Q. Doctor, I'm showing you what has been marked as
24 Plaintiffs' Exhibit 1407 in this deposition. It is
25 page 107 from the 1990 Surgeon General's report.

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1 Speaks of "LUNG CANCER." See, sir?

2 A. I'm sorry, where are you referring to?

3 Q. Looking at page 107.

4 A. Oh, yes, "LUNG CANCER."

5 Q. Right there at the top of the page.

6 A. Uh-huh.

7 Q. It says, "Epidemiologic -- quote, Epidemiologic

8 studies have provided overwhelming evidence for a

9 causal association of cigarette smoking with lung

10 cancer..., " period, unquote."

11 Do you agree with that, sir?

12 A. The epidemiologic studies are very strong

13 studies that show high risks from cigarette smoking.

14 Q. Extremely high risk; don't they, sir?

15 A. Well they are --

16 Q. Right?

17 A. -- very high risks. It's a major risk factor

18 for lung cancer.

19 Q. And if an individual stops smoking, he or she

20 decreases dramatically his or her risk for lung

21 cancer; isn't that right, sir?

22 A. Yes, depending on the age that they stop

23 smoking.

24 Q. If you drop down several lines on page 107,

25 Exhibit 1407, you see where it says, quote, "Compared

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1 with the risk among never smokers, the risk of lung
2 cancer for smokers may be increased twentyfold or
3 more" --

4 A. I'm sorry, I'm not sure where you're at.

5 Down --

6 Which paragraph?

7 Q. We're in the first paragraph.

8 A. Oh, first paragraph. I'm sorry.

9 Q. About five lines down. And I quote, "Compared
10 with the risk among never smokers, the risk of lung
11 cancer for smokers may be increased twentyfold or
12 more for heavy smokers....," unquote.

13 Do you agree with that, sir?

14 A. There is a substantial increase; it may be as
15 much as twentyfold. And again, it's -- it's talking
16 about risks, which is appropriate language.

17 Q. Which what?

18 A. I say I agree with the statement, "Compared with
19 the risk among never smokers...."

20 Q. And do you agree with the next sentence, sir,
21 that, quote, "Risk of lung cancer increases with the
22 number of cigarettes smoked daily and the duration of
23 cigarette smoking; the risk declines after
24 cessation....," end quote?

25 A. Yes.

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1 Q. Doctor, I'm showing you what has previously been
2 marked in this litigation as Plaintiffs' Exhibit
3 3320, which is from the 1989 Surgeon General's
4 report, sir.

5 A. It's Table 13; correct?

6 Q. Table 13 is correct.

7 Have you seen this document before, sir?

8 A. Yes.

9 Q. Do you believe that one of the -- let's take it
10 down the --

11 In fact, why don't you take out your pen. Do
12 you have a new pen through the compliments of the
13 Dorsey office?

14 A. Yes, I have a pen.

15 Q. Terrific.

16 MR. RYERSON: Mr. Kayser, I have an
17 objection insofar as --

18 Is it your intention to have him create new
19 documents here? I mean you can ask him questions,
20 but I don't think he really has to create trial
21 exhibits for you. Why don't we just ask him
22 questions and he'll answer them.

23 MR. KAYSER: Mr. Ryerson, if we were in
24 trial and we had an exhibit, you know that I could
25 ask him to write on the exhibit in front of the jury;

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1 and since these are exhibits that may very well come
2 before the jury, I think I'm well within my rights to
3 ask him to write on the exhibit.

4 If you instruct him not to, you instruct him not
5 to, but I'm going to ask him to write on the
6 exhibit.

7 MR. RYERSON: All right. Well I think what
8 you should do is to clarify, when you want him to
9 write something, you tell him exactly what you'd like
10 him to write. He'll write what you ask him to.

11 MR. KAYSER: Well I'm not going to --
12 I can't tell him what to write; I can only ask
13 if he agrees or disagrees with the statement and to
14 write down what he agrees or disagrees with. I
15 can't --

16 MR. RYERSON: Well let's proceed question
17 by question. But I'm concerned that we don't create
18 an ambiguity that either of us would want in the
19 transcript because what he writes down is not
20 understood as clearly as his answer. But let's
21 proceed question by question.

22 MR. KAYSER: Okay.

23 BY MR. KAYSER:

24 Q. Doctor, do you agree that one of the effects of
25 cigarette smoking is to increase the overall

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- 1 mortality in men and women?
- 2 A. Where are you reading?
- 3 Q. I'm reading in Table 13.
- 4 A. I don't see that.
- 5 Q. If you wouldn't mind (indicating.)
- 6 A. Oh.
- 7 Q. You have to read the whole line.
- 8 A. I see.
- 9 Q. Do you agree, doctor, that an effect of
- 10 cigarette smoking is overall mortality being
- 11 increased in men and women?
- 12 A. Yes, I'd agree that that's true. That's a
- 13 statistical value from epidemiologic studies.
- 14 Q. Okay.
- 15 MR. RYERSON: Excuse me. I don't think
- 16 he's asked you to do anything.
- 17 Q. Yes, I'd like to have you write "agree" --
- 18 If you agree with the statement, just write
- 19 "agree" next to it.
- 20 A. (Complying.)
- 21 Q. The next statement, doctor, do you agree that
- 22 one of the principal effects of cigarette smoking is
- 23 morbidity is increased in an overall fashion in men
- 24 and women?
- 25 A. As I said, there's a statistical association

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1 which shows an increased -- increase in morbidity,
2 depending on which one. That's a very general
3 statement. Morbidity takes into consideration a lot
4 of things.

5 I guess I agree with that.

6 Q. Okay.

7 MR. RYERSON: Excuse me. If -- if -- if he
8 is asking you to write something --

9 MR. KAYSER: I am asking you, yes, please.
10 If you agree, yes.

11 MR. RYERSON: If he asks you to write it.

12 MR. KAYSER: If he agrees. I'm not asking
13 him to do something he doesn't agree with. I'm just
14 asking if he agrees or disagrees.

15 MR. RYERSON: Well the words out of his
16 mouth are substantially more than "agree," and I just
17 want to clarify, you want him to reduce the
18 transcript to something he says he agrees with.

19 MR. KAYSER: He's a scientist. I believe
20 he's acting carefully.

21 Q. Let's move down to cardiovascular, doctor. It
22 says that cigarette smoking is a major cause of
23 coronary heart disease in men and women. Do you
24 agree or disagree with that?

25 A. We've talked about the use of "cause." I would

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1 say it's -- it's a risk, it's a major risk.

2 Q. Why don't you put "major risk" down there then.

3 Are you more comfortable with that? Are you more

4 comfortable with that, doctor?

5 A. I'm more comfortable with that.

6 Q. "Major risk."

7 Do you agree that a principal effect of

8 cigarette smoking -- or cigarette smoking is a cause

9 of stroke, doctor?

10 A. As I indicated, I -- I don't like the use of

11 "cause" in here because I think it's misleading.

12 Q. Would you say that cigarette smoking is a major

13 risk of stroke?

14 A. I'd say it's a risk of stroke.

15 Q. Major risk?

16 A. It's a risk factor.

17 Q. A significant risk factor?

18 A. I don't know.

19 Q. Just a risk factor, then, as far as you're

20 concerned; is that right?

21 A. That's right.

22 Q. Okay.

23 MR. RYERSON: Excuse me. Again, I think

24 he --

25 I would prefer, before you write anything, that

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1 Mr. Kayser asks you to write what he would like you
2 to write.

3 Q. Well when I --

4 I want you to write what you believe, doctor.
5 I'm not putting words in your mouth. And if I ever
6 use -- if I ever try to do that, you stop me. I
7 think you're capable of taking care of that for me.

8 MR. RYERSON: My instructions to the
9 witness are not to write at random on the document,
10 but rather, to respond to your questions. If you'd
11 like him to write something, you ask him to write
12 something.

13 MR. KAYSER: I got you. Okay.

14 MR. RYERSON: Okay?

15 MR. KAYSER: Okay.

16 Q. Cigarette smoking --

17 The next line, doctor, on Exhibit 3320, says
18 that increased smoking -- I'm sorry, that cigarette
19 smoking leads to increased mortality from
20 atherosclerotic aortic aneurism. Do you see that?

21 A. Yes. Atherosclerotic aortic aneurism.

22 Q. Do you agree with that?

23 A. I don't know. I'd have to look at that.

24 Q. Are you comfortable writing "don't know" next to
25 that?

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1 A. I could write "unsure."

2 Q. Okay. Does that make you more comfortable?

3 A. I'll write "unsure" next to it.

4 Q. That's fine.

5 MR. RYERSON: Fine. Again I'd instruct the
6 witness to wait until you ask him to write.

7 Q. And cigarette smoking, it next says, is a cause
8 and most important risk factor for atherosclerotic
9 peripheral vascular disease. Do you agree or
10 disagree with that, doctor?

11 A. I'm unsure.

12 Q. Would you feel comfortable writing "unsure" next
13 to that?

14 A. I could write "unsure" next to it.

15 Q. All right. Next it says that cigarette smoking
16 is the major cause of lung cancer in men and women.
17 Do you agree or disagree with that, doctor?

18 A. We've talked about that before. I disagree with
19 that use of "cause."

20 Q. All right. We have talked about that before.

21 Let's go to the next one. We talked about
22 laryngeal cancer. And it next says that cigarette
23 smoking is a major cause of cancer of the oral
24 cavity. Do you agree or disagree with that, sir?

25 A. I agree with --

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1 I disagree with the use of "cause" in that
2 context.

3 Q. Would you say that cigarette smoking is a major
4 risk factor for cancer of the oral cavity?

5 A. I would say it's a risk factor.

6 Q. Would you be comfortable in writing "risk
7 factor" next to that?

8 A. I could write "risk factor."

9 Q. Are you comfortable with that?

10 A. Yes.

11 Q. All right. Why don't you write "risk factor"
12 next to that.

13 A. (Complying.)

14 Q. I think we've talked about esophageal cancer.
15 It says that cigarette smoking is a contributory
16 factor for bladder cancer. Do you agree or disagree
17 with that statement, doctor?

18 A. I'm unsure about that.

19 Q. Are you comfortable writing "unsure" next to it?

20 A. I could write "unsure."

21 Q. Are you comfortable with that?

22 A. Yes.

23 Q. It next says that cigarette smoking is a
24 contributory factor for pancreatic cancer. Doctor,
25 do you disagree or agree with that?

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- 1 A. I'd have to say I'm unsure.
- 2 Q. Are you comfortable with putting "unsure" next
- 3 to that, sir?
- 4 A. Yes.
- 5 Q. All right. Why don't you do that.
- 6 A. (Complying.)
- 7 Q. Next, cigarette smoking is a contributory factor
- 8 for renal cancer. Do you see that, sir? Do you
- 9 agree or disagree with that?
- 10 A. I'll say I'm unsure.
- 11 Q. Are you comfortable putting "unsure" next to it,
- 12 sir?
- 13 A. Yes.
- 14 Q. Doctor, next it says, on Exhibit 3320, that
- 15 cigarette smoking has an association with gastric
- 16 cancer. Do you agree or disagree with that, sir?
- 17 A. I'm unsure.
- 18 Q. Do you feel comfortable in putting "unsure" next
- 19 to it, sir?
- 20 A. Yes.
- 21 Q. Next says --
- 22 MR. RYERSON: Excuse me, Mr. Kayser, were
- 23 you asking him to write "unsure"?
- 24 MR. KAYSER: Yes.
- 25 MR. RYERSON: Okay. Thank you.

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1 MR. KAYSER: If he's comfortable with it.
2 He says he is.
3 Q. And sir, it says that cigarette smoking has an
4 association with cervical cancer. Do you agree or
5 disagree with that, sir?
6 A. I'm unsure.
7 Q. Are you comfortable writing "unsure" next to it?
8 A. Yes.
9 Q. Turning the page, see where it says, on Exhibit
10 3320, sir, that cigarette smoking is a major cause of
11 chronic bronchitis? Do you agree or disagree with
12 that, sir?
13 A. Again, I disagree with the use of the word
14 "cause."
15 Q. Do you believe that cigarette smoking is a major
16 risk factor in chronic bronchitis, sir?
17 A. It's a risk factor in chronic bronchitis.
18 Q. But you don't believe it's a major risk factor,
19 sir?
20 A. I would say it's a major risk factor.
21 Q. Would you feel comfortable in writing "major
22 risk factor" next to that, sir?
23 A. Yes.
24 Q. Please do.
25 A. (Complying.)

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- 1 Q. Doctor, it next says that cigarette smoking is
2 the major cause of emphysema. Do you agree or
3 disagree with that statement, sir?
- 4 A. Again, I would say it's a -- it's a risk.
- 5 Q. Do you believe that cigarette smoking is a major
6 risk factor for emphysema, sir?
- 7 A. It's a risk factor for emphysema. It depends on
8 the circumstances of exposure. There are a lot of
9 other things that lead to emphysema.
- 10 Q. What would you feel more comfortable writing
11 there, sir, a "major risk factor" or simply "risk
12 factor?"
- 13 A. "Risk factor."
- 14 Q. Would you do that, sir.
- 15 A. (Complying.)
- 16 Q. And sir, it next says that cigarette smoking is
17 a cause for intrauterine growth retardation, which I
18 think is translated into the potential for
19 low-birth-weight babies for women who smoke. Do you
20 agree with that, sir?
- 21 A. There's a statistical association with that,
22 which means that there would be a risk factor.
- 23 Q. You believe it's a major risk -- cigarette
24 smoking is a major risk factor for low-birth-weight
25 babies, sir?

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- 1 A. I'm unsure.
- 2 Q. But you -- you acknowledge it's a risk factor of
- 3 of -- cigarette smoking is a risk factor for
- 4 low-birth-weight babies?
- 5 A. Yes.
- 6 Q. Would you feel comfortable writing "risk
- 7 factor," sir?
- 8 A. Yes.
- 9 Q. Please do that.
- 10 A. (Complying.)
- 11 Q. And doctor, it next says that cigarette smoking
- 12 is a probable cause of unsuccessful pregnancies. Do
- 13 you agree or disagree with that, sir?
- 14 A. Again, it's a risk factor.
- 15 Q. Do you believe it's a major risk factor or
- 16 simply a risk factor, sir?
- 17 A. I think it's just a risk factor.
- 18 Q. Would you feel comfortable in writing that down,
- 19 sir?
- 20 A. Yes.
- 21 Q. Would you do that, sir?
- 22 A. (Complying.)
- 23 Q. Let's drop down several.
- 24 Cigarette smoking is a probable cause of peptic
- 25 ulcer disease. Do you see that, sir?

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- 1 A. Yes.
- 2 Q. Do you agree or disagree with that statement,
- 3 sir?
- 4 A. There are increased risks of peptic ulcer
- 5 disease in people who smoke.
- 6 Q. Do you believe that cigarette smoking is a major
- 7 risk factor in peptic ulcer disease, sir?
- 8 A. I don't know.
- 9 Q. Would you feel comfortable in writing "increased
- 10 risk factor" next to that?
- 11 A. I would just say it's a risk factor.
- 12 Q. Do you feel comfortable in writing "risk factor"
- 13 next to peptic ulcer disease, sir?
- 14 A. Yes.
- 15 Q. Would you do that, sir?
- 16 A. (Complying.)
- 17 Q. Okay. If you could just -- I'd like to have you
- 18 just put your name down at the bottom of that so we
- 19 recognize your handwriting, and date it today's date,
- 20 which is whatever it is. Just sign your name, if you
- 21 would, please, sir.
- 22 A. (Complying.)
- 23 (Discussion off the record.)
- 24 MR. KAYSER: If you'd give that back to the
- 25 court reporter, I'd appreciate it, sir.

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1 BY MR. KAYSER:

2 Q. Now when the Surgeon General came to the
3 conclusions --

4 Actually, why don't you pick that -- I'm sorry.
5 Pick that up again, 3320.

6 Doctor, when the Surgeon General in the 1989
7 report, and Dr. Samet in the 1990 report that we've
8 seen previously in other exhibits, talks about
9 cigarette smoking causing diseases and using the word
10 "cause," the Surgeon General and Dr. Samet and the
11 reputable scientists that were involved in the 1989
12 and 1990 Surgeon General's reports didn't require
13 animal models before coming to the conclusion that
14 cigarette smoking caused those various diseases; did
15 they?

16 A. Well like I said, the definition that they're
17 using, I'll call it public health definition --

18 Q. Let me see if we can get to my question. In
19 reaching the conclusion that cigarette smoking causes
20 the various diseases that are listed in the 1989 and
21 1990 Surgeon General's reports, the Surgeon General
22 didn't require animal models before coming to that --
23 those conclusions; did he?

24 A. Those reports, in several places in the Surgeon
25 General's reports, are reviews of laboratory animal

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1 studies to date, they use that as contributing
2 information, but they're --

3 To try to answer your question, and the
4 question's a little vague, basically they examined
5 the epidemiologic evidence and came to their
6 conclusions based on the epidemiologic evidence
7 rather than on laboratory animal models. That
8 doesn't mean that they didn't recognize those and
9 discuss those.

10 MR. KAYSER: I'd appreciate it if the court
11 reporter would mark this as Exhibit 1408.

12 (Plaintiffs' Exhibit 1408 was marked
13 for identification.)

14 BY MR. KAYSER:

15 Q. Doctor, I'm showing you what has been marked as
16 Plaintiffs' Exhibit 1408, which is page 100 and 101
17 from the 1989 Surgeon General's report. And I don't
18 mean to be repetitive, but I want to have you drop
19 down to under the heading "CONCLUSIONS."

20 A. Yes.

21 Q. Do you see that, sir?

22 A. Yes, I do.

23 Q. And Arabic number three, quote, "Cigarette
24 smoking is now considered to be a probable cause of
25 unsuccessful pregnancies, increased infant mortality,

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1 and peptic ulcer disease; to be a contributing factor
2 for cancer of the bladder, pancreas, and kidney; and
3 to be associated with cancer of the stomach."

4 Could you tell me what part of paragraph three,
5 if any, you disagree with?

6 A. The one section that I would -- that I find a
7 bit vague the way it's used is "probable cause."
8 "Probable cause" indicates to me that it's a
9 statistical risk, and I would prefer to use
10 "statistical risk" rather than "probable cause."

11 Q. If you use --

12 If you took out the "probable cause" and added
13 "statistical risk," would you be comfortable with
14 that sentence, sir?

15 A. I would just say that it's a risk factor for
16 unsuccessful pregnancies.

17 Q. Increased infant mortality; right?

18 A. Yeah, increased infant mortality, peptic ulcers.

19 Q. Do you believe that cigarette smoking is a
20 contributing factor for cancer of the bladder,
21 pancreas, and kidney?

22 A. Again, I -- I think "contributing factor" is
23 quite vague. These words are -- are used
24 interchangeably. I would --

25 I would say that it's a risk factor for cancer

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1 of the bladder, pancreas, and kidney, and there's
2 some statistical association with cancer of the
3 stomach.

4 Q. Do you agree with that, sir?

5 A. Yeah. As I've stated, I will agree with that.

6 Q. All right. Turning the page, sir, let's go to
7 paragraph seven. States that "...the 1988 Surgeon
8 General's report, has established that cigarettes and
9 other forms of tobacco are addicting." Do you agree
10 with that, sir?

11 A. Actually that's not what's said here in the
12 first sentence. It says "habituating."

13 Q. Well it says, "In 1964" -- paragraph --

14 Well let me read it into the record so it's
15 clear. Paragraph seven on page 101 of Exhibit 1408
16 says, quote, "In 1964, tobacco use was considered
17 habituating. A substantial body of evidence
18 accumulated since then, and summarized in the 1988
19 Surgeon General's report, has established that
20 cigarettes and other forms of tobacco are addicting,"
21 unquote.

22 Do you agree with that, sir?

23 A. I don't know. I haven't looked at the issue of
24 addiction for cigarette smoking.

25 Q. You have no opinion on whether cigarette smoking

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1 is addictive one way or another, sir?

2 A. No. I haven't formed any opinion. I would have
3 to go back and look at the studies myself, and I
4 haven't done that.

5 Q. Doctor, let's go to Exhibit 1401, which is your
6 report just for a moment, if we could. On page five,
7 see where it says that lung cancer and emphysema
8 appear in only a minority of those persons who
9 smoke? See that?

10 A. Let's see, which line are you reading from?

11 Q. Last sentence of the first paragraph.

12 A. Last sentence -- oh, first paragraph.

13 Yes.

14 Q. What percentage of people who have lung cancer
15 are smokers, sir?

16 A. Let's see. Percentage of people that have lung
17 cancer that are smokers.

18 That's not what this sentence is referring to.

19 Q. No, I understand. I understand what the
20 sentence is referring to, doctor.

21 A. Yes.

22 Q. But based on your involvement in lung cancer
23 issues for the past 20 years, what percentage of
24 people who have lung cancer are smokers?

25 A. It varies from population to population.

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1 Q. In the United States of America, sir.

2 A. It's somewhere around two-thirds. It could be
3 higher, could be lower, depending on which data you
4 look at.

5 Q. Well your view, tell me what your view is,
6 doctor. In the United States as a whole, what
7 percentage of people who have lung cancer are
8 smokers, based on your --

9 A. As I say, my view depends on which data I'm
10 reviewing at the time. It's a large percentage of
11 those that are smokers --

12 Large percent of people with lung cancer are
13 smokers.

14 Q. You think it's at least two-thirds?

15 A. Like I said, that's -- that's a common figure
16 that's used.

17 Q. Actually, a common figure that's been used is as
18 high as 85 percent; isn't that right, sir?

19 A. Yes. Like I say, it could be more, could be
20 less, depending on the studies. I've seen 80
21 percent, 85 percent.

22 Q. Eighty-five percent of the people who have lung
23 cancer are smokers; isn't that right, doctor?

24 A. It depends on the study, but there is a range,
25 depending on the study, that's a high percentage.

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1 Q. What percentage of those people who have
2 emphysema are smokers, doctor?

3 A. Well those numbers tend to vary more widely.
4 The numbers that I've seen are 60, 70 percent. But
5 again, it depends on the study and which data are
6 being used.

7 Q. You've also seen data and studies that show that
8 80 percent of the people who have emphysema are
9 cigarette smokers; isn't that right, doctor?

10 A. I don't remember. It could be that high.

11 Q. Cigarette smoking is a significant major risk
12 factor for emphysema; isn't it, sir?

13 A. It's a -- it's an important --

14 It's a major risk factor for emphysema.

15 Q. And if people stop smoking cigarettes, they
16 decrease their risk of lung cancer; don't they,
17 doctor?

18 A. Yes.

19 Q. And if people stop smoking, they decrease their
20 risk for emphysema; don't they, doctor?

21 A. Yes.

22 Q. If people stop cigarette smoking, they decrease
23 their risk for laryngeal cancer; don't they, sir?

24 A. I don't think the laryngeal data is as clear as
25 for other data from epidemiologic or statistical

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1 studies. I think the trends show that, but that's
2 not as clear.

3 Q. If people stop --

4 If a person stops smoking, he or she decreases
5 their risk for COPD; isn't that right, sir?

6 A. Again that appears to be the case, but the
7 studies aren't as strong as they are for the first
8 two.

9 Q. If a person stops smoking, he or she decreases
10 his or her risk of stroke; isn't that right, sir?

11 A. Yes.

12 Q. Doctor, with respect to your report, which is
13 Exhibit 1401, who first asked you to write this
14 report, sir?

15 A. Paul Ryerson asked me to write the report.

16 Q. When did Mr. Ryerson ask you to do that?

17 A. This was approximately at the beginning of the
18 summer.

19 Q. Of 1997?

20 A. 1997.

21 Q. Other than Mr. Ryerson, have you discussed your
22 report with anyone?

23 A. No, I don't believe so. I don't remember
24 discussing it with anybody else.

25 Q. How many drafts of your report were written

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1 before Exhibit 1401 was finally published?

2 A. Well it depends --

3 It's a little vague. It depends on what you
4 call a draft.

5 Q. We're both speaking English, doctor, and you
6 have a Ph.D., so --

7 A. Yeah. This is --

8 The report that was written I edited, made a few
9 changes to, so that would have been one draft. So
10 there was one previous draft of this.

11 Q. And did you send that previous draft to Mr.
12 Ryerson?

13 A. Yes. I gave it to him.

14 Q. Did he make some suggestions or changes?

15 A. I don't remember any suggestions that he made
16 except possibly for format. But not for content.

17 Q. Did anybody else make any suggestions to you
18 with respect to changing that first draft?

19 A. No.

20 Q. Did anybody make any suggestions, any editorial
21 changes with respect to that first draft?

22 A. No.

23 Q. Well, is what we have here as Exhibit 1401
24 essentially the first draft then?

25 A. It is the first draft with my changes made to

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1 it.

2 Q. What changes did you make?

3 A. There were editorial changes, typographical
4 errors, and format.

5 Q. Doctor, would you be willing to submit this
6 report to a peer review panel for publication in a
7 toxicologist publication?

8 A. Well this is, first of all, not the type of
9 format that would be submitted to most peer reviewed
10 journals for publication in that most journals
11 publish research materials, and this represents a
12 summary of -- of scientific and medical information.

13 Q. Well excluding the format for a moment, just the
14 report itself, and forgetting -- as I say, excluding
15 the format, would you submit this for peer review and
16 publication in a scientific journal?

17 A. Well there are journals that do publish summary
18 materials, and assuming that the format could be
19 corrected, it could be submitted to a journal for
20 peer review and publication.

21 Q. You don't --

22 A. It has supporting references and what's required
23 for a summary paper. But it would have to be a
24 journal that uses that format.

25 Q. Have you met with any other experts in this

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- 1 case?
- 2 A. No.
- 3 Q. Have you met with any other attorneys in this
- 4 case other than Mr. Ryerson?
- 5 A. I met with the attorney here. I'm sorry. I
- 6 don't remember --
- 7 The one at the end of the table.
- 8 Q. Mr. Ginder?
- 9 A. Yes, Mr. Ginder.
- 10 Q. Who's with us here today.
- 11 A. Yes.
- 12 Q. Did he offer any suggestions with respect to
- 13 your draft?
- 14 A. No.
- 15 Q. You own an organization known as Thomas & Thomas
- 16 Technologies, Inc.; is that right, sir?
- 17 A. Yes, I do.
- 18 Q. Do you own 100 percent of the stock?
- 19 A. I own a majority share of the stock. I don't
- 20 own a hundred percent of it.
- 21 Q. What percent of the stock do you own?
- 22 A. More than 50 percent.
- 23 Q. What do --
- 24 A. I don't know the exact percentage.
- 25 Q. Can you tell me approximately what percentage of

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1 the stock you own in Thomas & Thomas Technologies,
2 Inc.?

3 A. Probably 55 percent.

4 Q. Who owns the rest of the stock?

5 A. My wife owns part of the stock. I believe she's
6 the other owner.

7 Q. So there are two --

8 A. Two stockholders.

9 Q. Two stockholders.

10 And I assume, since it says Inc., it's a
11 corporation; is that right?

12 A. Yes.

13 Q. And I understand you started working for the
14 cigarette companies in the late 1970s; is that
15 correct, sir?

16 MR. RYERSON: Objection as to form.

17 Q. Well I'm trying to cut down the time.

18 I read your deposition in Mississippi, doctor.
19 My recollection is you first started working for the
20 cigarette companies in the late 1970s. Is that
21 accurate?

22 A. I'm not sure what you mean by "working for the
23 cigarette companies." You'll have to better define
24 what you mean.

25 Q. Doctor, let's take a look at Exhibit 1400, page

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1 nine, line 19. Question is, quote, "Let me start
2 with when you first did any work for the cigarette
3 industry. When was that?

4 "Answer: Late 1970s."

5 Did I read that correctly, sir?

6 A. Yes. This talks about the work that I did at
7 Borrison Laboratories, some of which was supported
8 by the cigarette industry.

9 Q. The cigarette industry has been a continuous
10 client of Thomas & Thomas Technologies for the last
11 ten years; isn't that right, sir?

12 A. Approximately ten years.

13 Q. How much has the cigarette companies --
14 cigarette industry paid Thomas & Thomas Technologies
15 during that ten-year period, sir?

16 MR. RYERSON: Objection.

17 MR. KAYSER: What's the basis for the
18 objection?

19 MR. RYERSON: Can we go off the record?

20 (Discussion off the record.)

21 BY MR. KAYSER:

22 Q. Doctor, if you take a look at the transcript
23 from your Mississippi deposition, Exhibit 1400,
24 turning to page 80, line 16 -- eight zero, line 16,
25 in answer to a question, you say that, quote, "DES is

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1 a material that's been shown to produce some tumor
2 formation of the lung in people exposed to it via
3 inhalation."

4 A. Uh-huh.

5 Q. Is there an animal study that you're referring
6 to there, sir?

7 A. This is referring specifically to people exposed
8 via inhalation. This was a concern during worker
9 exposure to DES, when DES was produced and sold in
10 the United States.

11 Q. Can you cite any article in any scientific
12 journal which refers to DES having been shown to
13 produce tumor in lungs of people exposed to it via
14 inhalation?

15 A. I'd have to go back and look for it.

16 Q. Do you believe such an article exists?

17 A. Either an article or a report, occupational case
18 study report.

19 Q. Right now you can't cite any specific report or
20 article; is that correct, sir?

21 A. That's correct.

22 Q. Doctor, at some time you were with the National
23 Academy of Sciences; is that correct, sir?

24 A. Yes.

25 Q. What years were those?

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1 A. Let me look at my CV. I believe it was '82
2 through '94, but let me just check and make sure
3 those are the correct dates.

4 Yes, September 1982 through May 1994.

5 Q. An appointment to the National Academy of
6 Sciences is a prestigious appointment; isn't that
7 correct, sir?

8 A. Yes.

9 Q. The National Academy of Sciences draws a number
10 of respected and preeminent people from various
11 scientific fields; is that correct, sir?

12 A. Yes.

13 Q. And those are people who bring an intellectual
14 rigor and intellectual honesty to the research they
15 do?

16 A. Yes.

17 Q. And they bring that same intellectual rigor and
18 intellectual honesty to the things that are published
19 under the National Academy of Sciences?

20 A. Again, the terms you're using, I'm not sure
21 quite what you mean, but I -- I think the people that
22 serve there are, for the most part, leaders in their
23 areas, and we expect scientists to be honest in the
24 materials that they provide.

25 Q. Doctor --

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1 MR. KAYSER: Oh, before we do that, let's
2 mark this Exhibit 1409.

3 (Plaintiffs' Exhibit 1409 was marked
4 for identification.)

5 BY MR. KAYSER:

6 Q. Doctor, I'm showing you a document that is from
7 the book "Growing Up Tobacco Free", which is from the
8 Institute of Medicine from the National Academy of
9 Sciences, I understand.

10 MR. KAYSER: And just for the record, Mr.
11 Ryerson, I'm going to use several exhibits from
12 "Growing Up Free" -- "Growing Up Tobacco Free", and
13 on the first exhibit, this one, I have put several
14 pages in just so there's a point of reference. I'm
15 not going to repeat those same -- I haven't
16 reproduced those same pages in the other exhibits. I
17 just wanted you to be able to see it came from --

18 MR. RYERSON: Okay.

19 MR. KAYSER: -- that book --

20 MR. RYERSON: I appreciate it.

21 MR. KAYSER: -- so you had a point of
22 reference. But I'm not reprinting those pages over
23 and over again.

24 BY MR. KAYSER:

25 Q. Doctor, have you seen this --

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1 Have you seen the book "Growing Up Tobacco
2 Free"?

3 A. Yes, I have.

4 Q. This was published in 1994, it says, on the
5 second page.

6 A. Yes.

7 Q. Was "Growing Up Tobacco Free" published while
8 you were at the National Academy of Sciences?

9 A. I don't know. If I'm not mistaken, I left the
10 National Academy of Sciences on sabbatical leave in
11 May, and I believe this actually came out later in
12 the year.

13 Q. Were you aware --

14 While you were at the National Academy of
15 Sciences, were you aware that "Growing Up Tobacco
16 Free" was in the process of being written?

17 A. Yes.

18 Q. While you were at the National Academy of
19 Sciences, did anyone who was involved in writing
20 "Growing Up Tobacco Free" come and talk to you about
21 the publication?

22 A. I'm not sure what you mean, talk with me about
23 the publication.

24 Q. The subject of "Growing Up Tobacco Free" is
25 smoking in America; isn't that right, sir, in -- in

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1 the broadest sense?

2 A. Yes, it's about smoking in America.

3 Q. Well, did any of the authors or people involved
4 in the research that led to the writing of "Growing
5 Up Tobacco Free" while they were doing that research
6 discuss that research with you and discuss the
7 publication of "Growing Up Tobacco Free" with you?

8 A. I don't remember. I --

9 This is through the Institute of Medicine, which
10 was a different part of the National Academy of
11 Sciences than I was involved in, but we often had
12 meetings with the Institute of Medicine. And Barbara
13 Lynch, who is a study director for this study, was
14 one of the people that I met with from time to time.

15 Q. Did she talk to you about the fact that she was
16 going to edit a book called "Growing Up Tobacco
17 Free"?

18 A. Like I say, I don't remember. This has been
19 three years ago.

20 I was aware of its publication.

21 Q. Were you aware of the research -- at the time --
22 well strike that.

23 Before its publication, were you aware that it
24 was sort of in the works?

25 A. I was aware of the project.

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1 Q. Did anyone discuss the specifics of the project
2 with you in any fashion?

3 A. Like I say, I don't know. We had regular
4 meetings with the Institute of Medicine because they
5 were working on some of the same projects that we
6 were. In fact we had joint projects together. This
7 could have very well come up within those meetings.
8 I don't know.

9 Q. Do you know Barbara Lynch? I think you said you
10 did; right?

11 A. Yes. We've -- we've met and have been in the
12 same meetings together. I've heard presentations
13 from Dr. Lynch.

14 Q. What was her area of expertise, sir, if you
15 know?

16 A. I don't know.

17 Q. Do you know a Richard J. Bonnie, who was also
18 listed as an editor?

19 A. That's --

20 Richard J. Bonnie.

21 Q. Richard J. Bonnie. No, second page.

22 A. Oh.

23 Q. Do you know Richard J. Bonnie, sir?

24 A. I don't remember Richard Bonnie.

25 Q. Barbara Lynch is a reputable scientist in her

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1 field, doctor?

2 A. I'm sure she is.

3 Q. Doctor, if you turn to the third page of Exhibit
4 1409 -- no, the third actual page of the exhibit
5 itself before you get to the --

6 The second paragraph says, quote, "This report,"
7 which refers to the book itself, "This report has
8 been reviewed by a group other than the authors
9 according to procedures approved by a Report Review
10 Committee consisting of members of the National
11 Academy of Sciences, the National Academy" --

12 A. Hold it just a moment. Where are you reading?
13 "This report has been reviewed by the" --

14 The second paragraph?

15 Q. Yeah.

16 A. I'm sorry, go ahead. I was looking at a
17 different page than you were. Okay.

18 Q. Quote, "This report has been reviewed by a group
19 other than the authors according to procedures
20 approved by a Report Review Committee consisting of
21 members of the National Academy of Sciences, the
22 National Academy of Engineering, and the Institute of
23 Medicine," unquote. See that, sir?

24 A. Yes.

25 Q. Was any publication by the National Academy of

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1 Sciences required to go through that kind of review
2 procedure before it was published, sir, to your
3 knowledge?

4 A. Was --

5 I don't understand your question. Was any
6 other?

7 Q. Would any report published by the National
8 Academy of Sciences have to go through the review
9 procedure that I just quoted before it could be
10 published?

11 A. Yes.

12 Q. And is that a peer --

13 That's a rigorous review; is it not, sir?

14 A. Yes, it is.

15 Q. Now the second --

16 The next paragraph says, and I quote, "The
17 Institute of Medicine was chartered in 1970 by the
18 National Academy of Sciences to enlist distinguished
19 members of the appropriate professions in the
20 examination of policy matters pertaining to the
21 health of the public," period, unquote.

22 Is that an accurate statement, to the best of
23 your knowledge and belief, sir?

24 A. Yes.

25 Q. Doctor, I'd like to have you turn the page. And

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1 hopefully you're on "COMMITTEE ON PREVENTING NICOTINE
2 ADDICTION IN CHILDREN AND YOUTHS."

3 A. Yes.

4 Q. Do you know Paul R. Torrens, sir?

5 A. I believe we've met. I don't know him well.

6 Q. And is he a distinguished person in his
7 particular field, sir?

8 A. Yes.

9 Q. Do you know Albert Bandura, Ph.D., sir?

10 A. No.

11 Q. Do you know Neal Benowitz, sir?

12 A. Yes.

13 Q. Is Dr. Benowitz a respected and preeminent
14 person in his particular field, sir?

15 A. Yes.

16 Q. You've already told me about Mr. Bonnie.

17 Do you know K. Michael Cummings, sir?

18 A. I've met Dr. Cummings. I don't know him well.

19 Q. Is he considered to be a preeminent authority in
20 his field of expertise, sir?

21 A. As far as I know.

22 Q. Do you know Donald Dexter, sir?

23 A. No.

24 Q. Do you know Ellen R. Gritz, sir?

25 A. Yes.

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- 1 Q. Is Dr. Gritz a preeminent authority in her field
2 of expertise, sir?
- 3 A. Yes.
- 4 Q. Do you know Gerardo Martin, sir? Or I'm sorry,
5 Marin?
- 6 A. No.
- 7 Q. Do you know Mark Nichter?
- 8 A. No.
- 9 Q. Do you know Peggy O'Hara, sir?
- 10 A. We have met.
- 11 Q. Is Dr. O'Hara considered to be a preeminent
12 person in her field of expertise, sir?
- 13 A. Yes.
- 14 Q. Do you know Cheryl L. Perry, sir?
- 15 A. Yes. We've met, I believe.
- 16 Q. And is Dr. Perry considered to be a preeminent
17 person in her field of expertise, sir?
- 18 A. Yes.
- 19 Q. Turning the page, if you would, sir. Have you
20 turned the page?
- 21 A. Yes, I have.
- 22 Q. Do you know Dr. Schelling, sir, Thomas C.
23 Schelling?
- 24 A. Yes.
- 25 Q. Is he a preeminent person in his field of

1 expertise, sir?

2 A. Yes.

3 Q. Do you know Herbert Severson, sir?

4 A. I don't think so.

5 Q. Do you know Sarah Moody, sir?

6 A. Yes.

7 Q. Is Dr. Moody a preeminent person in her field of

8 expertise, sir?

9 A. Yes.

10 Q. Then that lists several staff members on the

11 Institute of Medicine staff. Do you --

12 We've already talked about Barbara Lynch, I

13 believe.

14 A. Uh-huh.

15 Q. Robert Cook-Deegan, sir, do you know him?

16 A. I believe we've met. I do not know him well.

17 Q. Is Dr. Deegan considered to be a preeminent

18 person in his specialty, sir?

19 A. I'm sure he is.

20 Q. Do you know Sharon Russell, sir?

21 A. I believe I've met Sharon Russell.

22 Q. Do you know what her field of expertise is?

23 A. No.

24 Q. Is she a preeminent person in whatever her field

25 of expertise is?

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1 A. I don't know.

2 Q. Okay. Let us turn the page, sir, of Exhibit
3 1409. We are now on page three of the book, are we
4 not?

5 A. Yes.

6 Q. It says the "Use of" -- and I quote, "Use of
7 tobacco products is the nation's deadliest
8 addiction," period, unquote.

9 Do you agree or disagree with that statement,
10 doctor?

11 A. I don't have a basis for agreeing or
12 disagreeing. I don't know.

13 Q. Would you tend to believe that that statement is
14 true, doctor, that the use of tobacco products is the
15 nation's deadliest addiction, because it is in a book
16 published by the National Academy of Sciences by a
17 number -- by a number of preeminent people that you
18 have just described?

19 A. I don't tend to believe things without going
20 through and analyzing them myself. If I were to
21 consider that first statement, I would go back and --
22 and look at the papers myself before I would agree
23 with that statement.

24 Q. Do you believe that a book published by the
25 National Academy of Sciences should have credibility

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1 in the reading public in the United States of
2 America?

3 A. I'd hope it would have credibility.

4 As you notice, this is a prevention policy.

5 This is a policy statement, in other words, --

6 Q. That --

7 A. -- which means that this may not be specifically
8 a scientific statement but a policy statement.

9 Q. It's a policy statement by the National Academy
10 of Sciences; isn't that right, sir?

11 A. By this committee.

12 Q. After peer review, a rigorous peer review by the
13 National Academy of Sciences. Isn't that right, sir?

14 A. Yes.

15 Q. So before the National Academy of Sciences was
16 able to say, and I quote, "Use of tobacco products is
17 the nation's deadliest addiction, there was rigorous
18 peer review.

19 A. The first thing, this is not the National
20 Academy of Sciences speaking, this is the committee
21 speaking. The report of the committee was peer
22 reviewed by an independent report review committee as
23 part of the standard operating procedures of the
24 National Academy of Sciences. As you pointed out,
25 each report is reviewed by the report review

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1 committee and approved, but the --

2 Each report is a report of the committee rather
3 than the National Academy. There are reports from
4 time to time, even within the same year, that have
5 disagreements from one report to the other. So the
6 report is not a statement of the National Academy of
7 Sciences, it's a statement of this committee that has
8 been reviewed by the National Academy of Sciences.

9 Q. The Institute of Medicine, as we have just
10 learned from a previous page, is a part of the
11 National Academy of Sciences; isn't that right, sir?

12 A. It's under the umbrella of the National Academy
13 of Sciences.

14 Q. And the National Academy of Sciences, then,
15 takes responsibility for those things that the
16 Institute of Medicine does and publishes; isn't that
17 right, sir?

18 A. I'm not sure what you mean by "takes
19 responsibility." As I indicated, these are not
20 statements specifically from the National Academy of
21 Sciences, these are statements from this committee of
22 the Institute of Medicine.

23 Q. Doesn't the National Academy of Sciences lend
24 its prestige to the Institute of Medicine?

25 A. Yes.

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1 Q. So when a publication comes out from the
2 Institute of Medicine, it really is a part of a
3 publication of a part of the National Academy of
4 Sciences; isn't it?

5 A. That's correct.

6 Q. So --

7 A. But what I'm saying is the National Academy of
8 Sciences does not specifically make policy statements
9 of this. This is not a statement of the National
10 Academy, this is a statement of this committee within
11 the Institute of Medicine. And it's an important
12 distinction because the National Academy produces
13 approximately a report a day, and there are a lot of
14 different things in those reports which recommend the
15 best work that that particular committee can do, but
16 there may be even inconsistencies from committee to
17 committee.

18 Q. Do you know of any other publication by any
19 other -- by the National Academy of Sciences or any
20 other group therein which comes to a contrary
21 conclusion with respect to tobacco products being the
22 nation's deadliest addiction?

23 A. Like I say, I don't know of a publication that's
24 different than this.

25 Q. The second sentence, doctor, on page three of

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1 1409 says, and I quote, "Smoking cigarettes is the
2 leading cause of avoidable death in the United
3 States." Do you agree or disagree with that
4 sentence, doctor?

5 A. The way the sentence is phrased --

6 As I say, it's a policy statement, is based on
7 the epidemiologic information. It's a policy
8 statement. Basically to me it's saying that for
9 those people who smoke, there is a major increase in
10 their risk, and if smoking were stopped, that risk
11 would decrease. That's what it says to me.

12 Q. Well --

13 A. We've already talked about the use of "cause" in
14 this type of context.

15 Q. Well now we are talking, doctor --

16 Before we were talking about the word "cause" by
17 the Surgeon General which you talked about in the
18 public health context. Now we're talking about
19 scientists at the National Academy of Sciences, and
20 these sciences -- these scientists are using "cause"
21 in a different fashion, I believe. Now let's look --

22 A. No, they're using "cause" as making a public
23 policy statement on prevention.

24 Q. There is nothing so far that we have in this
25 document that you've seen that talks about cause

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1 simply being based on epidemiological studies; do we?

2 A. I -- I don't know how to answer your question.

3 Can you rephrase that?

4 Q. Well let me go back to the second sentence on

5 page three, doctor. It says, quote, "Smoking

6 cigarettes is the leading cause of avoidable death in

7 the United States," unquote. Do you disagree or

8 agree with that sentence?

9 A. I say, the way they've used "cause," I would

10 disagree with as a scientist.

11 Q. Now you understand that they are scientists who

12 are using "cause" in that sentence; don't you,

13 doctor?

14 A. I understand that this is a policy statement

15 that the people on this committee are putting

16 together to try to reduce the amount of alcohol used

17 in the United States -- or alcohol -- tobacco used in

18 the United States.

19 There are similar statements on page four.

20 "Cigarettes kill more Americans than AIDS, alcohol,

21 car accidents...."

22 Q. Let's stick with my statement here, doctor.

23 Let's stick with the second sentence here.

24 A. Well I think this shows this is a policy

25 description that's being provided by this committee.

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1 Q. Well do you think the committee is trying to
2 mislead the American public, doctor, by saying that
3 smoking cigarettes is the leading cause of avoidable
4 death in the United States?

5 A. I think what the committee is trying to do is
6 convey to the public the -- that this is a major risk
7 factor and that this could be avoided by reducing the
8 amount of tobacco consumption.

9 Q. Well these leading scientists, these preeminent
10 scientists who you just described as preeminent,
11 could have said that cigarette smoking is a major
12 risk factor, but these preeminent scientists chose to
13 say that smoking cigarettes is the leading cause of
14 avoidable death in the United States; didn't they,
15 doctor?

16 A. I don't know that later in the report they
17 haven't made that statement.

18 Q. Well at this point in the report they have said
19 smoking cigarettes -- those preeminent scientists
20 have said that smoking cigarettes is the leading
21 cause of avoidable death in the United States; isn't
22 that right, doctor?

23 A. That's the statement that they have made.

24 Q. Do you think they're lying?

25 A. I think they're making a policy statement.

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1 Q. What's the difference in your mind between a
2 policy statement and a scientific statement?

3 A. A policy statement is made to the public to try
4 to change people's behavior within the public and
5 reduce the risk to the public overall, and that's the
6 intention of this. Just as on the next page they
7 talk about cigarettes killing more Americans than
8 AIDS, alcohol and car accidents.

9 Q. Well let's -- let's stick with the first page
10 here and my question.

11 Do you think that these preeminent scientists
12 who are writing "Growing Up Tobacco Free" are in any
13 way trying to scare the American public by using the
14 word "cause" as opposed to "major risk factor?"

15 A. I can't speak for these scientists. I wasn't a
16 member of this committee, so I don't know what their
17 intent was. But I know in policy statements, which
18 this is clearly a policy statement, their intention
19 usually in a policy statement -- like I say, I can't
20 speak for these people -- that the intention here
21 appears to be to warn the public of -- of a material
22 which causes increased risk and could be avoided.

23 Q. Doctor, if you had been on the peer review
24 committee of the National Academy of Sciences that
25 was reviewing this, would you have object -- have

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1 objected to the word -- the use of the word "cause"
2 in the second sentence on page three here?

3 A. I don't know. It depends on what the whole
4 document said. I wouldn't just take one sentence. I
5 would have to look at the whole document in
6 context --

7 Q. Do you think that the --

8 A. -- and -- and see what their analysis was and
9 see how they were coming up with this.

10 It's very strong wording, just as it's very
11 strong wording in the figure on the next page, and
12 it's, as with a lot of public health pronouncements,
13 it's -- it's meant to catch people's attention.

14 Q. Well do you believe that using the word "cause"
15 in the second sentence on page three is
16 intellectually dishonest?

17 A. No. I think that's a public policy -- or a
18 policy definition of it. It's not a strict
19 definition that scientists use.

20 Has nothing to do with honesty or dishonesty, it
21 has to do with how it's defined.

22 Q. Do you think that the use of the word "cause" in
23 the sentence, "Smoking cigarettes is the leading
24 cause of avoidable death in the United States," is
25 scientifically imprecise?

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1 A. It's scientifically imprecise.

2 Q. Doctor --

3 A. But like I say, they weren't trying to make a
4 scientific statement. This is a policy statement.

5 Q. How do you know that?

6 A. And --

7 Because it says it's a policy statement up at
8 the top, "PREVENTION POLICY." This is a public
9 health policy statement for prevention.

10 Q. Do you think that a policy statement for
11 prevention is different than a scientific statement?

12 A. Clearly, yes.

13 Q. Doctor, do you see where it says in the second
14 sentence, "More than 400,000 people die prematurely
15 each year to diseases attributable to tobacco use?"

16 Do you agree or disagree with that, sir, based
17 on your 20 years of being involved in cancer
18 research?

19 A. This is a statement which is referenced to
20 something else.

21 I don't know how they have done this
22 calculation. This is a statistical calculation.

23 Do you know what reference one is?

24 Q. Doctor, just in your long association with
25 cigarette smoking, the cigarette industry, cancer,

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1 that you testified about before, in the 20 years in
2 this field, are you able to state whether you agree
3 or disagree with that statement, that -- that is,
4 more than 400,000 people die prematurely each year
5 from diseases attributable to tobacco use?

6 MR. RYERSON: Excuse me, Mr. Kayser, I'm
7 just going to object to the extent that you're asking
8 him to address a statement without the authority.
9 You haven't given him the full citation.

10 A. I can't answer that without seeing how the
11 calculation was done, and I don't know what reference
12 one is.

13 Q. Well putting aside reference one for just a
14 moment, just from your own knowledge as a person in
15 this field for 20 years and the expertise that you
16 have claimed to have brought to bear on this, do you
17 agree or disagree that more than 400,000 people die
18 prematurely each year from diseases attributable to
19 tobacco use?

20 A. I don't know how to answer the question. Some
21 of the types of terms that are being used here, this
22 is clearly a statistical calculation, and to do such
23 things as a calculation of premature death requires
24 comparisons of statistical figures from smokers and
25 non-smokers. Like I say, I don't know how to answer

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1 your question --

2 Q. Okay.

3 A. -- without knowing where this came from and how
4 they did this.

5 Q. I'm not asking about where this figure came from
6 or how they did it. I'm asking now, based on your
7 knowledge as somebody in this field for 20 years,
8 field of cigarette smoking and cancer --

9 Let me put it this way: Without reference to
10 page three of the exhibit and based on your
11 experience over the last 20 years as a person who
12 claims to be an expert in this area, how many people
13 die prematurely each year from diseases attributable
14 to tobacco use?

15 A. I don't know the answer to that.

16 Q. Can you give me an approximation?

17 A. Not off the top of my head. I would have to go
18 back and look and -- and see. There's --

19 Q. Do you think --

20 A. It would vary --

21 It would vary depending on how the analysis was
22 done and who did the analysis. Like I say, it's a
23 statistical number based on, really, the risks that
24 you see within a large population, and --

25 Q. Do you think at least a hundred thousand people

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1 die each year prematurely from diseases attributable
2 to tobacco use?

3 A. Like I say, I don't know. I'd have to go back
4 and look at the -- the information.

5 Q. Do you --

6 Based on your long experience in this field,
7 doctor, do you think that it's more than a hundred
8 thousand people or less than a hundred thousand
9 people who die prematurely each year from diseases
10 attributable to tobacco use?

11 A. I'll have to go back and take a look at the
12 information.

13 Q. Well I'm just talking from your experience,
14 doctor, without reference to the document in front of
15 you, just in your own experience.

16 Based on your experience as somebody who claims
17 expertise in this field, is it more than a hundred
18 thousand people or less than a hundred thousand
19 people who die prematurely each year from diseases
20 attributable to tobacco use?

21 A. Would you like to define for me what you mean by
22 "premature?"

23 Q. Well, doctor, the word "premature" is --

24 First of all, you're a Ph.D., and we're using
25 this in the -- we're speaking English here, and that

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1 this is also used in the National Academy of Sciences
2 document, so I'm going to use it as they're using
3 it. So let's get back to the question.

4 Are you unable to answer the question because
5 you don't understand the word "premature?"

6 A. I'm unable to answer it because the question is
7 so vague and could vary so widely that -- and I,
8 frankly, haven't looked at this type of statistical
9 analysis for a while, so I don't remember what the
10 numbers were.

11 "Premature" really could mean several different
12 things based on how the statistical analysis was
13 done, so I don't know how to answer your question
14 based on how this is stated.

15 Q. Based on my question or based on the document?

16 A. Well your question comes out of the document,
17 and --

18 Q. So do you think that the word "premature," the
19 fact that they've used the word "premature" on page
20 three of Exhibit 1409, is an imprecise term?

21 A. It's a term that has several different meanings
22 in statistics.

23 Q. Do you think that the word "premature" being
24 used on page three has been used in a sloppy
25 scientific manner?

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1 A. I assume it hasn't. Like I say, this is not a
2 scientific statement, it's a policy statement, but
3 until I went back and looked at the reference to what
4 this is based on, I don't know what's being -- even
5 being stated here because I don't know how the terms
6 are being defined.

7 Q. Now doctor, let's drop down a couple of
8 sentences --

9 Well let's take the next sentence. Quote, "The
10 toll of deaths attributable to tobacco use is greater
11 than the combined toll of deaths from AIDS, car
12 accidents, alcohol, suicides, homicides, fires, and
13 illegal drugs," unquote. Do you agree with that
14 statement, sir?

15 A. Well this references this figure on the next
16 page, 1-1, which is titled "Cigarettes kill more
17 Americans than AIDS, alcohol, car accidents, murders,
18 suicides, drugs, and fires combined."

19 Q. Do you -- do you --

20 A. Again these are statistical -- statistical
21 figures.

22 Let me read this statement again.

23 Like I say, I don't know how to answer that. I
24 haven't gone back and looked at it myself. I'd have
25 to look at numbers and see what they said.

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1 I've done this type of analysis before. This
2 analysis was done by the Centers for Disease Control,
3 it appears, and, you know, they -- they're careful in
4 the way they analyze this. But these could vary
5 depending on --

6 These are statistical values. They could vary
7 depending on how this was actually done.

8 Q. Well do you give any credibility to that
9 statement at all since it appears in a document from
10 the Institute of Internal Medicine -- or Institute of
11 Medicine with the National Academy of Sciences?

12 A. I -- I don't understand what you mean. It's an
13 interesting statement. You're asking whether I agree
14 or disagree with it, and all I'm telling you is I'd
15 have to go back and look at the numbers myself to see
16 if -- if I agreed or disagreed on -- on how the
17 analysis was conducted.

18 Q. Well you note --

19 You have previously told me that you believe
20 that people had a greater risk from being hurt in car
21 accidents than they did from any risk of smoking. Do
22 you see that that is contrary -- your statement is
23 contrary to what is in -- on page three of this book?

24 A. No. Actually what I said is that they have a
25 greater risk of being hurt. This has to do with

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1 Americans being killed. I was talking about
2 morbidity, and you're talking about mortality, so
3 there's a difference.

4 And like I say, I don't know how this analysis
5 was done. This shows motor vehicle accidents as
6 46,300, and smoking as 418,690 deaths per year,
7 1990. I assume these are statistical numbers that
8 they've come up with, and this is -- but I don't know
9 how they made these comparisons.

10 I think it's an interesting comparison. It's
11 the types of comparisons that would be put in a
12 public policy statement to the public to try to give
13 the public information that they can use to modify
14 their behavior to have better public health.

15 Q. Well doctor, throughout the morning you've
16 mentioned that, that these are public policy
17 statements and public health statements, and it makes
18 it sound as though the people who are involved in
19 Surgeon General's reports, these preeminent
20 scientists like Dr. Samet and others and these
21 preeminent scientists that are writing "Growing Up
22 Tobacco Free" are somehow lying to the public about
23 the risks of tobacco and cigarette smoking. Is that
24 your thesis?

25 A. No.

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1 MR. RYERSON: Objection as to form.

2 Q. Are all these scientists who are involved in
3 writing the Surgeon General's report and with the
4 National Academy of Sciences who wrote "Growing Up
5 Tobacco Free" somehow trying to scare the American
6 public?

7 A. I don't know what their motivations are, but I
8 wouldn't think that was the case. I think they're
9 trying to convey information to the public, as they
10 have been mandated.

11 Q. And they're supposed to convey accurate
12 information to the public; aren't they, doctor?

13 A. I assume so, depending on how you define
14 "accurate." Like I say --

15 Q. You can't define "accurate?"

16 A. Well there's a lot of different ways of doing
17 these types of analyses. These are statistical
18 analyses again, and if you had four statisticians sit
19 down and do four sets of analyses, you'd probably end
20 up with four different sets of values. That's not to
21 say that one is necessarily more accurate than the
22 other one, it's just simply those are statistical
23 analyses that have been conducted.

24 Q. Doctor, would you agree with me that the
25 cigarette companies over the last three decades have

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1 been selling death and disease to the American
2 public?

3 A. I don't have any basis for answering that.

4 That's a --

5 I don't know anything about their business.

6 Q. Well the cigarette companies sell cigarettes;
7 don't they, doctor?

8 A. Yes.

9 Q. Would you agree that the cigarette companies
10 have been selling a product that causes death and
11 disease to the American public over the last three
12 decades, sir?

13 A. We've talked about the problem that I have with
14 "causes." We don't know in a scientific sense what
15 causes these diseases, at least as far as cigarettes
16 are concerned.

17 Q. Do you think that the cigarette companies have
18 been selling a product over -- over the last three
19 decades that has been healthy for the American
20 public?

21 A. Like I say, I don't -- I don't know --

22 I know very little about the business of the
23 cigarette companies.

24 Q. Doctor, the cigarette companies --

25 A. I -- I've been asked to -- to look at the

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1 scientific information, and that's what I've looked
2 at, and that's what I've based my opinions on. I
3 don't know what cigarette companies have or have not
4 done.

5 Q. Well the cigarette companies over the last three
6 decades have sold cigarettes to the American public;
7 haven't they, doctor?

8 A. Yes.

9 Q. Have the cigarette companies over the last three
10 decades been selling a product to the American public
11 that has been healthy for the American public,
12 cigarettes?

13 A. They've sold a product to the public which, if
14 used, does increase the risk of some diseases.

15 Q. Risk of death; doesn't it? Cigarettes increase
16 the risk of death.

17 A. Well risk of mortality, death.

18 Q. Mortality and death are the same thing; aren't
19 they?

20 A. Yes.

21 Q. So the cigarette companies for the last three
22 decades, and even before, have been in the business
23 of selling a product that causes death and disease;
24 haven't they, doctor?

25 A. Not that causes, that -- like I say, that it

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1 increases the risk of.

2 Q. Doctor, let's drop down to the middle of the
3 first paragraph on page three. See where it says
4 that, quote, "Smoking is the main cause of 87 percent
5 of deaths from lung cancer...?"

6 Do you agree with that, doctor, based on your 20
7 years as an expert in this field?

8 A. Like I say, the increased number of deaths that
9 are associated with lung cancer could be as high as
10 87 percent.

11 This is based on reference number two, and I
12 don't know what reference number two is --

13 Q. I'm talking about your --

14 A. -- or where this came from.

15 Q. Doctor, I'm talking about your experience as
16 somebody who claims to be an expert over the last 20
17 years in dealing with these issues. Do you agree
18 that smoking is the main cause of 87 percent of the
19 deaths from lung cancer?

20 A. I don't use "cause" in that way.

21 Q. Are the --

22 Is the National Academy of Sciences being
23 scientifically imprecise in using the word "cause" in
24 that fashion?

25 A. This is a policy statement. This is being used

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1 in a policy format.

2 Q. Well let me --

3 A. This is not a scientific statement as such.

4 This is --

5 Again, this is based on a statistical analysis
6 of the public and the number of deaths based on the
7 relative risk from smoking.

8 Q. Would you feel more comfortable if it said
9 smoking is associated with 87 percent of the deaths
10 from lung cancer?

11 A. Well if it's -- you know, if it indicated that
12 it was associated statistically with 87 percent, and
13 that's assuming that --

14 These are such vague and general statements that
15 are used in a policy format, it's very difficult to
16 answer, because I -- you know, I don't know --

17 Lung cancer is not even a single disease. So
18 it's -- I'm not sure what they have lumped together,
19 I don't know how they've done the analysis. I just
20 don't know how to answer your question.

21 I have seen ranges, like I say, from two-thirds
22 up to, in this case, 87 percent of deaths that are
23 associated with -- from lung cancer associated with
24 cigarette smoking. So this came out of a reference,
25 reference number two, and I don't know what that

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1 reference is.

2 Q. From your --

3 A. So I don't know how they have done that
4 analysis. And it's a -- it's a set of statistical
5 analyses.

6 Q. Do you think that that's an imprecise statement,
7 doctor, that smoking is the main cause of 87 percent
8 of the deaths from lung cancer?

9 A. I think it's a statement that's made to try to
10 be a clear policy statement, and so I think it's a
11 policy statement that conveys the results of these
12 studies, but it's -- it's not a scientific statement.

13 Q. Do you agree with the statement that smoking is
14 the main cause of all cancer deaths -- or 30 -- I'm
15 sorry, smoking is the cause of 30 percent of all
16 cancer deaths? Agree or disagree with that?

17 A. Again, I don't know what the analysis was based
18 on, and I don't know what they included in cancer
19 deaths.

20 Q. So in your view, does this first paragraph,
21 doctor, with respect to tobacco products, smoking
22 cigarettes, and the various things here, it just
23 lacks credibility in your view?

24 A. No, that's not what I said.

25 Q. Do you believe it lacks credibility?

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1 A. What I said was that this -- this first
2 paragraph is a paragraph which is clearly a policy
3 statement made to convey to the public the risks
4 associated with smoking cigarettes and it's stated in
5 a way that -- which would convey that meaning. If it
6 were stated in a scientific way, it probably wouldn't
7 be as successful in conveying that information to the
8 public in that the public doesn't always understand
9 things in a scientific format.

10 Q. So the National Academy of Sciences is talking
11 down to the American public in this first paragraph;
12 is that your position, doctor?

13 A. No, I think they're trying to explain this to
14 the American public in terms that the American public
15 will understand and identify with, such as the use on
16 the next page of "kill" in Figure 1-1. Scientists
17 probably would not use that type of terminology, but
18 if you want to catch the public's attention, those
19 are the types of terms that you would use.

20 Q. Do you believe that the first paragraph on page
21 three of Exhibit 1409 accurately tells the public
22 about the risks of cigarette smoking?

23 A. Like I say, I don't know about its accuracy
24 because I haven't gone back and looked at the
25 information myself. I don't know. It's their policy

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1 statement, and a lot of policy statements are not
2 what I would call scientifically accurate, but they
3 are successful policy statements in conveying
4 information to somebody that's not scientifically
5 trained.

6 Q. Do you believe that the individuals who are the
7 authors of this report and who participated in this
8 report that we have reviewed, some of which you knew
9 and consider preeminent in their field, would be
10 guilty of giving inaccurate information to the public
11 in a document such as Exhibit 1409?

12 A. What I believe is that these scientists were
13 trying the best they could to convey information to
14 the public in terms that the public would understand,
15 and that's what's stated on page three.

16 Q. But have they accurately --

17 A. It's a policy statement. Whether it's
18 scientifically accurate, I don't know; I haven't gone
19 back and looked at the references. And it's not the
20 way that a scientist would normally state it.

21 Q. Based on your 20 years in the field and your
22 claimed expertise, do you believe that this
23 publication of the National Academy of Sciences in
24 the first paragraph on page three accurately conveys
25 to the public the risks of cigarette smoking?

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1 A. I think I just answered that. I -- I don't know
2 how to answer that without looking at the data
3 myself.

4 Q. So you would have to look at the data as opposed
5 to just being able to answer from your own
6 experience?

7 A. Yeah. I would always look at the data on any
8 particular set of studies before I was asked to agree
9 or disagree with what was being said.

10 Q. What publication would you go to?

11 A. For one thing, I would go back and look at these
12 references that are cited here to see where this
13 information came from, and if I were asked to -- to
14 take a look at this statement, I would read each one
15 of these references to see if I agreed to how the
16 analysis was done.

17 Q. Okay. The second paragraph, doctor, on page
18 three, it says, quote, "According to a recent
19 estimate by the Office of Technology Assessment, each
20 smoker who died in 1990 as a result of his or her
21 smoking, on average, would have lived at least 15
22 additional years if a nonsmoker," period, unquote.

23 Do you agree with that statement?

24 A. There's a parenthetical phrase after that that
25 tries to clarify what they're referring to. Again,

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1 this is a statistical calculation, and it says this
2 assumes that individuals who die from smoking-related
3 causes would have experienced a life expectancy of
4 the total population; that is, smokers and
5 non-smokers combined, had they not died prematurely.

6 I haven't seen the calculation, but I wouldn't
7 be surprised that they could make that type of
8 calculation based on mortality tables in smokers and
9 non-smokers. I don't know if 15 is correct or if
10 it's 14 or 17, and I'd have to look at how they did
11 the calculation. But I think they can do that kind
12 of calculation.

13 Q. Based on your experience, doctor, in 20 years in
14 this field and the expert that you claim to be, do
15 you believe that smokers die on the average before
16 non-smokers?

17 A. You know, based on the statistical information
18 I've seen, smokers do -- as a population, do die
19 earlier than non-smokers.

20 Q. And based on the information that you have and
21 you received, what's the average number of years -- I
22 mean they use 15 years here, that smokers die on an
23 average 15 years before non-smokers. Is that
24 consistent with the information that you have?

25 A. I say it varies quite a bit depending on how

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1 long the person smoked and the extent to which they
2 smoked.

3 Q. We are talking about averages across the board.

4 A. Yeah.

5 Q. The whole population.

6 A. That's -- that's what makes it rather
7 difficult. But it's very vague. I wouldn't be
8 surprised if they could calculate a value of 15
9 years, and depending on how long the person has
10 smoked, in a whole population you could see
11 everything from zero to 15 years, maybe 20 years.
12 Depends on the population and how the analysis is
13 done.

14 Q. Well in the United States of America, is there
15 an average -- have you seen a statistical average of
16 the fact that --

17 First, you've agreed that smokers on the average
18 die before non-smokers; --

19 A. Uh-huh.

20 Q. -- haven't you?

21 A. Yes.

22 Q. Your answer is yes?

23 A. Yes, my answer is yes.

24 Q. And have you also --

25 There is a number of years that an average

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1 smoker dies before a non-smoker. Do you know what
2 that is? Is that within your experience, without
3 reference to page three?

4 A. I've seen various values.

5 Q. What's your opinion?

6 A. I don't remember what the values are. The --

7 Q. What is your opinion?

8 A. The one that sticks out most in my mind is the
9 value of ten years, and I think that's one that some
10 other people use as well as an average value.

11 Q. Are you comfortable with ten years?

12 A. It's -- it's -- it's --

13 I mean these are statistical values. It's --
14 it's a reasonable value. I haven't done the
15 calculations for ten years, but in the information
16 that I've seen it seems to be a logical calculation.

17 Q. Are you comfortable with stating that, on
18 average, smokers will die ten years prematurely
19 before non-smokers?

20 A. Like I say, it depends on the analysis. That's
21 a value that's used by a lot of people.

22 Q. Would it be used by you?

23 A. I would check the value before I ever used it,
24 and I haven't checked it before this.

25 Q. Where would you check the value?

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1 A. I'd go back and look at calculations done by --

2 Centers for Disease Control does these types of
3 calculations.

4 Q. Would you rely on the Centers for Disease
5 Control if they made that calculation?

6 A. I would go back and look at how the calculation
7 was done. Scientists have an obligation to try to
8 clarify and make sure that things are done the way
9 that they would agree.

10 Q. And that's what those scientists are doing on
11 page three of Exhibit 1409; aren't they, doctor?
12 These scientists --

13 A. Actually they're reporting information from the
14 Centers for Disease Control.

15 Q. That's right.

16 A. This doesn't appear to be a calculation that
17 they did themselves.

18 Q. But those scientists who have written 1409 have
19 the obligation to try to clarify things and make sure
20 they're done the way they should be; isn't that
21 right, sir?

22 A. I would assume that -- that somebody has gone
23 back and looked at this calculation in detail that
24 was a member of the committee.

25 Q. Let's turn to page five, doctor. Do you see in

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1 the middle of the page, "Whatever its total
2 magnitude, the social cost of smoking is
3 substantial?" Do you see that?
4 A. Sorry. Put my glasses on.
5 Okay, in the middle of the page as part of the
6 first --
7 Q. First paragraph.
8 A. -- partial paragraph?
9 Q. Yeah.
10 A. Okay.
11 Q. See where it says, a little below, "Whatever its
12 total magnitude, the social cost of smoking...." Do
13 you see that?
14 A. Yes.
15 Q. I'll quote that for you. Quote, "Whatever its
16 total magnitude, the social cost of smoking is
17 substantial. Even based on conservative assumptions,
18 expected lifetime medical expenditures of the average
19 smoker exceed those of the average nonsmoker by 28
20 percent for men and 21 percent for women," unquote.
21 Do you agree with that sentence, doctor?
22 A. I have no way of -- of knowing that.
23 Q. Based on your --
24 A. That -- that -- excuse me. That type of
25 calculation, medical expenditures, really is not done

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1 by a toxicologist or even an epidemiologist, those
2 are done by an economist.

3 Q. So you have no way of knowing whether those
4 figures are accurate or inaccurate?

5 A. That's correct.

6 Q. Doctor, let's drop down on page five of Exhibit
7 1409 to the second -- the next paragraph. Do you see
8 where it says, quote, "The nation has a compelling
9 interest in reducing the social burden of tobacco
10 use," period, unquote? Do you agree with that,
11 doctor?

12 A. I think that's the intention of this. The
13 nation does have an interest in reducing the risks to
14 the public at large of tobacco use, and that's what's
15 being stated here, so I -- I don't disagree with
16 that.

17 Q. So you agree with the sentence, quote, "The
18 nation has a compelling interest in reducing the
19 social burden of tobacco use," unquote. Do you agree
20 with that?

21 A. Yeah. It's a very general statement.

22 Q. Well do you agree with it?

23 A. Yes.

24 MR. KAYSER: Can we go off the record for a
25 moment.

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1 (Discussion off the record.)

2 MR. KAYSER: We're back on the record. I'm
3 going to inquire into the compensation received by
4 Thomas & Thomas Technologies from the cigarette
5 industry over the last ten years. I also intend to
6 ask about several specific years. Before I do that,
7 Mr. Ryerson, you have a comment.

8 MR. RYERSON: Yes. I just wanted to
9 explain for the purposes of the record the delay on
10 this point. And we appreciate your cooperation in
11 allowing us to confer on this, Mr. Kayser. There is,
12 as you know, an order in this case that says neither
13 side will inquire in depositions into the
14 compensation of experts. This included total
15 compensation and hourly rates. I did not participate
16 in the negotiation of this, which I understand was an
17 agreed order, and it seems to me there are many
18 possible ways to interpret this.

19 Without waiving anyone else's right in any other
20 deposition to interpret to this or to go to the
21 judge, if necessary, I am -- I am telling you that I
22 do not object to your asking Dr. Thomas questions
23 about compensation that do not relate to his role in
24 this case.

25 MR. KAYSER: Thank you, Mr. Ryerson.

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1 Just so the record is clear, I interpret the
2 order that you've just read as the compensation for
3 the report he has written in this case and for his
4 testimony here and the compensation for this case,
5 and my questions will exclude that. But that's my
6 understanding of the order.

7 BY MR. KAYSER:

8 Q. Dr. --

9 A. Yes.

10 Q. -- Thomas, we have previously talked about the
11 fact that you and your wife own 100 percent interest
12 in Thomas & Thomas Technologies.

13 A. Yes.

14 Q. And we also have talked about the fact that
15 you -- the cigarette industry has been a continuous
16 client of Thomas & Thomas Technologies for
17 approximately ten years. Is that correct, sir?

18 A. It's been a client off and on of Thomas & Thomas
19 Technologies. I'm not sure that it's been a
20 continuous client --

21 Q. Doctor, would you --

22 A. -- in that the Thomas & Thomas Technologies
23 basically is -- does consulting, both myself and
24 others, and the Jones, Day, Reavis & Pogue, which are
25 the ones that had asked me to do work for them, were

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1 at times -- I did work at times for them and other
2 times I did no work but was working for other
3 organizations.

4 Q. Well --

5 A. So it's not continuous as such.

6 Q. Well would you take a look at Exhibit 1400, sir,
7 which is your deposition in the Mississippi case.
8 Specifically page 92. Page 92, the question on line
9 15, quote, "So the cigarette industry has been a
10 continuous client of Thomas and Thomas's for the past
11 15 years?

12 "Answer:" --

13 A. Which line are you on? Page 92.

14 Q. Page 92, line 15. They're numbered down the
15 left-hand side of the page.

16 A. Line 15.

17 Q. Are you on page 92?

18 A. Okay.

19 Q. Page 92, line 15. Are you there?

20 A. Yes.

21 Q. "Question: So the cigarette industry has been a
22 continuous client of Thomas and Thomas's for the past
23 15 years?

24 "Answer: Not for 15 years.

25 "Question: For ten years?"

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1 Answer -- your answer: "Probably for ten
2 years."

3 Was that information accurate when you testified
4 under oath?

5 A. Like I say, probably for ten years. That means
6 off and on for ten years. I think that's -- that's
7 still a correct statement.

8 Q. All right. Excluding --

9 I don't want you to discuss in the questions I'm
10 about to ask you about compensation, doctor, any of
11 the -- any money you're getting paid for this case
12 either in writing the report, coming here to testify,
13 or any of the expenses you've been paid. So exclude
14 this case --

15 A. Okay.

16 Q. -- in answering my question.

17 How much has the cigarette -- have the cigarette
18 companies, cigarette industry, paid Thomas & Thomas
19 Technologies over the past ten years?

20 MR. RYERSON: Objection as to form, vague.

21 A. I don't know the answer to that.

22 Q. Can you tell me approximately?

23 A. No. I don't know.

24 Q. Has it been over a hundred thousand dollars?

25 A. I don't know what it's been. I've -- I've not

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1 tried to -- to total it up. In fact it would be
2 difficult because, as I indicated, there are projects
3 off and on, but at times there's very little work
4 that was done.

5 Q. Well do you know whether the --

6 Are you able to tell me whether the cigarette
7 industry has paid you -- paid Thomas & Thomas
8 Technologies less than a hundred thousand dollars
9 over the last ten years?

10 A. No, I don't. Like I say, I don't know.

11 Q. Do you know whether the cigarette industry has
12 paid Thomas and Thomas more than \$500,000 over the
13 last ten years?

14 A. I don't know. I don't know.

15 Q. Do you know whether the cigarette industry has
16 paid Thomas & Thomas Technologies more than a million
17 dollars over the last ten years?

18 A. I don't know.

19 Q. Do you know whether the cigarette industry has
20 paid Thomas & Thomas Technologies more than two
21 million dollars over the last ten years?

22 A. I don't know how much the company has been paid.

23 Q. Do you know whether the cigarette industry has
24 paid Thomas & Thomas Technologies more than three
25 million dollars over the last ten years?

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1 A. I don't know.

2 Q. Could be more than three million dollars over
3 the last ten years, doctor?

4 A. I doubt it.

5 Q. Do you think it --

6 Do you think the cigarette industry has paid
7 Thomas & Thomas Technologies as much as two million
8 dollars over the last ten years?

9 A. I doubt it.

10 Q. Do you know whether the cigarette industry has
11 paid Thomas & Thomas Technologies more than a million
12 dollars over the last ten years?

13 A. I doubt it.

14 Q. Do you know whether the cigarette industry has
15 paid Thomas & Thomas Technologies more than \$500,000
16 over the past ten years?

17 A. Like I say, I don't know. I would doubt they
18 have.

19 Q. How much did the cigarette industry pay Thomas
20 and Thomas in 1997, excluding compensation in this
21 case?

22 A. In 1997, I don't know.

23 Q. Do you have any idea?

24 A. No.

25 Q. More than a hundred thousand dollars?

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- 1 A. No, I don't think so.
- 2 Q. More than \$50,000?
- 3 A. I don't know.
- 4 Q. More than \$75,000?
- 5 A. Like I say, I don't know how much has been paid
- 6 to Thomas & Thomas Technologies. There are several
- 7 people that -- that work on -- that work for Thomas &
- 8 Thomas Technologies, and at any one time there are
- 9 several projects that are being done, and I don't --
- 10 I don't know how much has been billed.
- 11 Q. Is your wife a scientist, doctor?
- 12 A. No.
- 13 Q. Does she work for Thomas & Thomas Technologies?
- 14 A. Off and on in the past she has. She doesn't
- 15 right now.
- 16 Q. What has she done for Thomas & Thomas
- 17 Technologies?
- 18 A. Bookkeeping, that type of thing.
- 19 Q. She is not what we call a scientific
- 20 professional?
- 21 A. No.
- 22 Q. Does Thomas & Thomas Technologies bill for your
- 23 wife's work?
- 24 A. When she has worked on -- on things that were
- 25 directly associated with the project; it may be

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1 filing or something of that nature. Normally she
2 would not be billed.

3 Q. So you are really the main owner of Thomas &
4 Thomas Technologies; aren't you, sir?

5 A. I'm the main owner of it. She also owns stock
6 in it.

7 Q. The family derives a substantial amount of
8 income from Thomas --

9 Your family derives a substantial amount of
10 income from Thomas & Thomas Technologies; isn't that
11 right, sir?

12 A. No.

13 Q. It doesn't?

14 A. No.

15 Q. What portion of your income over the last five
16 years has come from Thomas & Thomas Technologies?

17 A. I don't know the answer to that. A lot of this
18 time period was covered when I was at the National
19 Academy of Sciences, and when I was there, less than
20 five percent of my income came from other
21 activities.

22 The principal income that I have now is from the
23 International Center for Environment and Health, and
24 this still constitutes a minority, a very small
25 portion of income from those activities.

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1 Q. You left the National Academy of Sciences in
2 1994; didn't you, doctor?

3 A. Yes.

4 Q. What percentage of your income, the family
5 income, the Thomas family income -- withdraw that
6 question. Start again.

7 What percent of the Thomas family income came
8 from Thomas & Thomas Technologies in 1995?

9 A. I don't know. I would guess it was two or three
10 percent.

11 Q. What percentage of the Thomas family income came
12 from Thomas & Thomas Technologies in 1996?

13 A. Like I say, I don't -- I don't know the answer
14 to that. I'd have to go back and look at the --

15 I don't know.

16 Q. What would your best approximation as an owner
17 of Thomas & Thomas Technologies be?

18 A. Probably five percent.

19 Q. What percentage of your income has come from
20 Thomas & Thomas Technologies so far in 1997, doctor,
21 excluding this case?

22 A. I -- I don't know.

23 Q. Do you have any idea?

24 A. It's --

25 I would expect it's still a fairly small

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1 proportion.

2 Q. Tell me again the name of the company that is
3 your main source of income.

4 A. International Center for the Environment and
5 Health. It's on the business card.

6 Q. I understand.

7 Has the International Center for Environment and
8 Health ever received any money from the cigarette
9 industry?

10 A. No.

11 Q. Has the International Center for the Environment
12 and Health ever received any money from any law firm
13 working for the tobacco industry?

14 A. No.

15 Q. Do you understand that even though the
16 individual lawyers contact you and ask you to do work
17 for them, ultimately the tobacco industry is paying
18 the bill for you?

19 A. Yes, I understand that the law firms receive
20 their money from companies that produce cigarettes.

21 Q. And you're ultimately paid by the companies that
22 make cigarettes; isn't that right, sir?

23 A. No. I'm paid by the law firms.

24 Q. But the money that --

25 A. The money comes from the companies.

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1 Q. The money used to pay you comes from the
2 cigarette companies. You understand that; don't you,
3 doctor?

4 A. I assume that's the case.

5 Q. You don't know whether you've earned two million
6 dollars over the last ten years from the cigarette
7 companies in Thomas & Thomas, you just don't have any
8 idea?

9 A. No, I don't -- I don't have any idea how much
10 was earned.

11 MR. KAYSER: This is 1410, please.

12 (Plaintiffs' Exhibit 1410 was marked
13 for identification.)

14 MR. RYERSON: Do you have an extra copy?

15 MR. KAYSER: I'm sorry, I do.

16 (Document handed to Mr. Ryerson.)

17 MR. RYERSON: Thanks.

18 BY MR. KAYSER:

19 Q. Doctor, I'm showing you what has been marked as
20 Exhibit 1410, Plaintiffs' Exhibit 1410, which is a
21 "Letter on Tobacco Control" from the National Cancer
22 Policy Board.

23 A. Yes.

24 Q. And the National Cancer Policy Board is a part
25 of the National Academy of Sciences, doctor?

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1 A. It's a part of the Institute of Medicine, and I
2 understand also has ties to the National Research
3 Council.

4 Q. And which also --

5 And the Institute of Medicine is a part of the
6 National Academy of Sciences; isn't that right, sir?

7 A. That's right. It's under what's called the
8 umbrella of the National Academy. It is a separate
9 organization, but it is a part of the National
10 Academy of Sciences.

11 Q. Let's take a look at the second page of Exhibit
12 1410, doctor, and down at the bottom left-hand
13 corner, do you know Peter M. Howley?

14 A. Not well. I believe we've met.

15 Q. Is he a preeminent scientist in his particular
16 scientific field?

17 A. As far as I know.

18 Q. Joseph V. Simone, do you know him?

19 A. Yes.

20 Q. And is Mr. Simone a preeminent person in his
21 field of expertise, sir?

22 A. Yes.

23 Q. Do you know John Bailar or Bailar?

24 A. Bailar.

25 Q. Do you know him?

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- 1 A. Yes, I do.
- 2 Q. Is he a preeminent person in his field of
- 3 expertise, sir?
- 4 A. Yes.
- 5 Q. Do you know Norman Daniels, sir?
- 6 A. Yes.
- 7 Q. Is he a preeminent person in his field of
- 8 expertise?
- 9 A. I don't know him very well. I assume so.
- 10 Q. Do you know Joseph Davie?
- 11 A. Davie?
- 12 Q. Yes.
- 13 A. Yes, we've met.
- 14 Q. Is he a preeminent person in his field of
- 15 scientific expertise, sir?
- 16 A. I assume so.
- 17 Q. Do you know what Mr. Howley's field of expertise
- 18 is, doctor?
- 19 A. No, I don't.
- 20 Q. Do you know Mr. Simone's field of scientific
- 21 expertise is, sir?
- 22 A. He's a physician, but I'm not sure what area he
- 23 specializes in.
- 24 Q. Do you know what area Mr. Bailar specializes in,
- 25 sir?

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1 A. Mr. Bailar is a statistician and also is a
2 physician.

3 Q. Do you know what Mr. Daniels is, sir?

4 A. No.

5 Q. Do you know what Mr. Davie is, sir, what field
6 Mr. Davie is a specialist in?

7 A. I believe it's international public health.

8 Q. And doctor, do you recognize the letterhead here
9 as something you've seen before when you were at the
10 National Academy of Sciences -- or the type of
11 letterhead you've seen before when you were part of
12 the National Academy of Sciences?

13 A. It's typical of the letterhead for the National
14 Academy of Sciences.

15 Q. You also see that this letter is sent on July
16 18th, 1987?

17 A. Yes.

18 Q. And you see that it is sent to the following
19 members of the executive branch in Congress; that is,
20 Donna Shalala, who is a member of the president's
21 cabinet?

22 A. Yes.

23 Q. William Corr and Bruce Reed, I believe, in the
24 White House as far as I know, but I wouldn't swear to
25 that.

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1 Mr. Ryerson is nodding his head. Maybe he
2 agrees with me.

3 And when we get past Bruce Reed, starting with
4 Newt Gingrich and ending with Patrick Leahy, would
5 you agree with me that all of those people are
6 members either of the United States House of
7 Representatives or the United States Senate?

8 A. Yes, it's my knowledge, those are all members.

9 MR. KAYSER: Probably if we can agree on
10 nothing else, we can probably stipulate to that, Mr.
11 Ryerson.

12 Q. Now the National Cancer Policy Board and the
13 preeminent authors that you have just described here,
14 doctor, in the first sentence say, quote, "Tobacco
15 use is the Nation's largest cause of preventable
16 disease and disability...." And without going to the
17 others, but -- the rest of the sentence, do you agree
18 with that portion of the sentence, doctor, that
19 tobacco use is the nation's largest cause of
20 preventable disease and disability?

21 A. Well like I say, this is -- this is a letter
22 on -- on public health. This is a policy letter.
23 Sometimes the boards of the National Academy of
24 Sciences do prepare policy letters to Congress and
25 the executive branch, and this is a -- a policy

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1 letter. I'm not sure what this is in support of, but
2 this was probably in support of some legislation that
3 was taking place. And from time to time the National
4 Academy's boards will send letters either supporting
5 or not supporting legislation that's being considered
6 by Congress. I assume that's what this is.

7 Q. Well let's start with my question, doctor, and I
8 move to strike that answer as being non-responsive.

9 Let's start with, quote, "Tobacco use is the
10 Nation's largest cause of preventable disease and
11 disability...." Do you agree with that statement?

12 A. Like I say, I don't agree with the use of
13 "cause" in there, but as a policy statement, that is
14 a reasonable statement.

15 Q. You think it's a legitimate statement to make by
16 the National Cancer Policy Board?

17 A. Like I say, I just don't --

18 As a scientist, I can't agree with the use of
19 "cause." This is a policy statement, it's made as a
20 policy statement, and it's in non-scientific
21 terminology, so I accept it that way.

22 Q. Well the individuals who are signing this letter
23 are all scientists; aren't they, doctor?

24 A. Well they're writing to people that are not.

25 Q. Well, they are writing to people who presumably

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1 have a -- are reasonably sophisticated, although we
2 could argue the politics of it I suppose, but they
3 are writing to people who are supposedly
4 sophisticated and reasonably intelligent people;
5 aren't they?

6 A. I assume so.

7 Q. All right. So this letter, Exhibit 1410, is not
8 being sent to the general public; is it, doctor?

9 A. This is being sent to Congress and the executive
10 branch --

11 Q. Right.

12 A. -- in support of legislation, it appears.

13 Q. Well we don't know --

14 We don't know it's in support of legislation,
15 but we do know that it's being sent to members of the
16 executive branch and Congress.

17 Now, are these preeminent scientists guilty of
18 sloppy language when they say, quote, "Tobacco use is
19 the Nation's largest cause of preventable disease and
20 disability," unquote?

21 A. What they're trying to do is they're trying to
22 convey the results of the workshop that was held --
23 in fact, there was a workshop held in 1994 by the
24 Institute of Medicine, and also the report that we
25 looked at earlier, "Growing Up Tobacco Free", and

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1 this is based on that information that they are
2 conveying to Congress. This is not, as I indicated,
3 meant to be a scientific statement, this is
4 information that's conveyed more in a policy format.

5 Q. Doctor -- I object to the answer as
6 non-responsive and move to strike.

7 Doctor, let's take the first sentence and let's
8 answer my question now. It says, quote, "Tobacco use
9 is the Nation's largest cause for preventable disease
10 and disability." Are these preeminent signatories to
11 this letter guilty of sloppy writing, sloppy
12 scientific writing when they say that?

13 A. No.

14 Q. Are they being honest and straightforward with
15 members of Congress when they say "Tobacco use is the
16 Nation's largest cause of preventable disease and
17 disability?"

18 A. Like I say, I think what they're trying to do is
19 they're trying to convey some scientific information
20 to people that are not scientists in a non-scientific
21 format. And I'm trying to respond to your question.

22 Q. Do you believe that the authors of Exhibit 1410
23 are accurate when they are telling members of
24 Congress and the executive branch that, quote,
25 "Tobacco use is the Nation's largest cause of

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1 preventable disease and disability?"

2 A. They're using "cause" differently than I would.

3 Q. Do you think that they -- their use of "cause"

4 here is misleading?

5 A. No. Like I say, they're trying to convey some

6 information to them and they're using "cause"

7 differently than scientists would.

8 Q. These people are scientists themselves; aren't

9 they, doctor, the authors of 1410?

10 A. But that doesn't mean that everything they write

11 is going to be written in a scientific format. I

12 write letters all the time that I'm trying to convey

13 information to somebody that may not be trained as a

14 scientist, and I may not write it the same way as I

15 would to scientists.

16 Q. Well, do you believe that the members of the

17 executive branch and Congress will be misled by the

18 sentence, quote, "Tobacco use is the Nation's largest

19 cause of preventable disease and disability,"

20 unquote?

21 A. Like I say, they are --

22 The intention is not to mislead, as far as I can

23 understand their intention, and I don't know what

24 their intentions are, but they're simply making a

25 statement which is a policy statement. This is not

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1 meant to be a scientific analysis. They're not going
2 to do a scientific analysis in two pages.

3 Q. Well Exhibit 1410 is designed to convey accurate
4 information to Congress; isn't that right, sir, and
5 the executive branch?

6 A. I think it's -- it's intended, certainly, to
7 convey the feelings of this board, this policy board.

8 Q. And it's to convey those feelings accurately;
9 isn't that right?

10 A. Well, depending on what you mean by
11 "accurately." I believe that these people on this
12 board supported this statement; in other words, they
13 agreed to the statement.

14 Q. Do you know of anybody else who disagrees with
15 that statement on that board?

16 A. No.

17 Q. Do you know of any other writing as of July
18 18th, 1997, from the National Academy of Sciences or
19 any of the branches thereunder, that is contrary to
20 the statement, quote, "Tobacco use is the Nation's
21 largest cause of preventable disease and disability,"
22 unquote?

23 A. I don't know of any other writing right now.

24 Q. Well, let's go back to my earlier question. Do
25 you believe that the authors of this report, of this

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1 letter, that is, Exhibit 1410, are conveying accurate
2 information to the members of the executive branch
3 and Congress when they say in the first sentence,
4 quote, "Tobacco use is the Nation's largest cause of
5 preventable disease and disability," unquote?

6 A. That's not the first sentence. The first
7 sentence ends with a period.

8 Q. I understand that, but let's just -- I'm taking
9 that phrase.

10 A. Well if you want to take the whole sentence,
11 it's similar to the sentence we were talking about
12 earlier from "Growing Up Tobacco Free".

13 Q. I want to talk about -- I want to talk about
14 this portion of the sentence, doctor. All right?

15 A. Okay.

16 Q. I want to talk about the first phrase. We're
17 going to get to the second phrase, so you need not
18 worry about that. We'll get there.

19 A. You said sentence.

20 Q. I said the first portion of the sentence.

21 Do you believe that the authors of Exhibit 1410
22 are conveying accurate information to the members of
23 the executive branch and Congress when those authors
24 say, quote, "Tobacco use is the Nation's largest
25 cause of preventable disease and disability,"

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1 unquote?

2 A. As I said, I don't know how you're defining

3 "accurate."

4 Q. Well I'm defining --

5 A. Are they conveying policy information? They're

6 conveying policy information that was contained in

7 their report.

8 Q. I'm defining "accurate," doctor, in the same way

9 that we use it in everyday conversation in the

10 English language, and your being a Ph.D., I assume

11 you understand "accurate." So let's try it again.

12 Do you believe that the preeminent authors of

13 Exhibit 1410 are conveying accurate information to

14 the members of the executive branch and Congress when

15 they say, quote, "Tobacco use is the Nation's largest

16 cause of preventable disease and disability,"

17 unquote?

18 A. Based on how I would define "accurate," since

19 you asked me how I'd define "accurate," is I would

20 say from a scientific standpoint that "cause" is not

21 properly defined.

22 Q. Doctor, the sentence goes on to say that tobacco

23 use kills over 400,000 people per year in the United

24 States and claims the lives of one in three smokers.

25 Do you agree with that statement?

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1 A. Well, that is very similar to the statement we
2 talked with earlier -- talked about earlier. I don't
3 know where it came from, but it appears that that's
4 information from the Centers for Disease Control.

5 The second part of that, claiming one in three
6 smokers, is -- I'm not sure what they're including in
7 that. Again, these are very vague policy statements,
8 so it's hard to respond to it.

9 Q. Do you -- do you think --

10 A. I don't --

11 I don't know what they mean by "claiming the
12 lives of," if they're talking about cancer, they're
13 talking about other diseases, what they're including
14 and what they're excluding.

15 Q. They are saying that tobacco use claims the
16 lives of one in three smokers. Based on your
17 knowledge and experience in the 20 years that you've
18 been involved in this field, do you agree or disagree
19 that tobacco use claims the lives of one in three
20 smokers, or do you know?

21 A. That's different than the statements that I have
22 typically seen in the past. I don't -- I don't
23 really know how to respond to that because I don't
24 know what they're referring to.

25 Q. Do you think that these --

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1 A. It's a --

2 It's a statistical analysis, again, that they
3 have come up with this. I don't know what they're
4 including in the statistical analysis.

5 Q. Okay. Well doctor, do you think that these
6 preeminent authors of the National Cancer Policy
7 Board are lying to the members of the executive
8 branch and Congress when they say that tobacco use
9 kills over 400,000 people per year and claims the
10 lives of one in three smokers?

11 A. I don't think that their intention is to lie to
12 Congress. I think their intention is to try to
13 convey the results of both the workshop and the
14 report that they have produced in a format that would
15 help support either current or future legislation.

16 Q. Well based on your knowledge of the preeminent
17 folks who are preeminent scientists in the National
18 Academy of Sciences and your knowledge of the authors
19 of this report, do you think that the authors of
20 Exhibit 1410 are guilty of sloppy scientific writing
21 when they say that tobacco use claims the lives of
22 one in three smokers each year?

23 A. Like I say, until I know what that figure is
24 based upon, I can't respond to your question.

25 Q. You just don't know; is that right?

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1 A. If you take one other --

2 Just pick a study, and these studies vary
3 tremendously, if you pick one study that you look,
4 say, at the incidence of lung cancer in heavy
5 smokers, that's one in -- approximately one in ten,
6 depending on which study you take. So they're
7 talking about one in three. I don't know if they're
8 including those types of studies or excluding those
9 types of studies, I don't know what else they're
10 including, so I don't know how to respond to your
11 question because I don't know what this is based on.
12 I would have to --

13 If somebody were to ask me if that were a true
14 statement, as you've just done, I would want to go
15 back and look at the workshop that was held in 1994
16 and the report that was produced in 1997.

17 Q. All right, doctor, let's drop down to goals, and
18 they're listed one through five on the two pages of
19 the letter. I'd like to have you just read the first
20 goal, and when you're done reading it, let me know.

21 A. Okay, I've read it.

22 Q. Let's start with goal number one. Do you agree
23 that this nation should reduce the rate of youth
24 initiation and tobacco use?

25 A. What I did was I read the part below that.

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1 Q. Well let's read -- let's read the bold.

2 A. I'll read the bold part.

3 Q. Yeah.

4 A. Okay, I've read it.

5 Q. Doctor, do you agree that in the United States

6 we should reduce the rate of youth initiation --

7 strike that.

8 Doctor, do you agree that in the United States

9 we should reduce the rates of youth initiation of

10 tobacco use?

11 A. Yes, I'd like to see less young people smoke.

12 Q. Doctor, do you agree that the failure to achieve

13 reduction in the rates of youth initiation of tobacco

14 use should be penalized sufficiently to bring strong

15 incentives for compliance by the tobacco industry?

16 A. I don't know how to respond to that in that

17 that's a broad not only policy question, it's a legal

18 question.

19 Q. Well let's just talk about you as a citizen in

20 this country, doctor, and as a father of five

21 children, and presumably one of these days you're

22 going to have grandchildren.

23 A. Yes.

24 Q. So let's put it in that context. Let's just put

25 it Dr. Thomas, citizen. Okay? Do you agree that the

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1 failure to reduce the rates of youth initiation of
2 tobacco should be penalized sufficiently to build
3 strong incentives for compliance by the tobacco
4 industry?

5 A. Like I say, that's -- that's a legal statement.

6 Q. I'm not asking you as a lawyer, doctor. I know
7 you're not a lawyer. I'm not asking you --

8 A. Well as an individual, I don't know how to
9 interpret that statement. I'm not a lawyer, I'm not
10 professionally trained as a lawyer, so I don't
11 know -- it's --

12 It's asking me to balance various -- both
13 financial and legal and -- and other types of
14 issues. I'm a scientist, I'm speaking as a
15 scientist, and I simply don't know how to respond to
16 that.

17 Q. Well I'm asking you to respond --

18 A. The board -- the board -- if I can finish.

19 The board that produced this policy statement
20 had people that were policy specialists. They've got
21 attorneys on this.

22 Q. Who are the attorneys in the authors there,
23 doctor, the authors on the left-hand side of the --
24 bottom left-hand side of the page?

25 A. Well let's see. I'd have to go back and look.

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1 I know several of these folks --

2 I think Daniel Nathans has a law degree.

3 Q. You're looking at the last page.

4 A. Yes. Well those are also authors of this.

5 Q. Okay.

6 A. Those are the members of this board that
7 produced this.

8 I don't know, Joseph Davie may have a law degree
9 as well.

10 Q. Do you know?

11 A. I don't know. There's --

12 Q. Well let's -- let's go back --

13 A. Most of the boards of the National Academy,
14 especially a board that has responsibility for
15 policy, would have two, maybe three attorneys on the
16 board. So as they prepare these types of statements
17 that also have legal ramifications as well, at least
18 the attorneys would review those and -- and it would
19 be in their expertise, not in the expertise of
20 scientists such as myself. That's why it makes it
21 difficult to respond.

22 MR. KAYSER: We're going to take a short
23 break now for lunch, and I'd like to talk to the
24 attorneys for a moment.

25 (Luncheon recess taken at 12:26 o'clock

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1 AFTERNOON SESSION

2 (Deposition reconvened at 1:20 o'clock
3 p.m.)

4 BY MR. KAYSER:

5 Q. All right, doctor, we're back to Plaintiffs'
6 Exhibit 1410, which I hope you have in front of you.

7 (Discussion off the record.)

8 Q. All right, doctor, we're on Plaintiffs' Exhibit
9 1410, number one, certain goals, and we're at the
10 last part of that sentence that's written in black
11 bold type. And I'm not asking you to answer this
12 question in terms of being a legal issue or even in
13 terms of your being a scientist so much, I'm asking
14 in terms of your being a father, perhaps a soon-to-be
15 grandfather one of these days, and I would like to
16 know whether you agree that the failure to achieve a
17 reduction in youth initiation of tobacco use should
18 be penalized sufficiently to build strong incentives
19 for compliance by the tobacco industry?

20 A. I can't answer that.

21 Q. Why not?

22 A. I don't know how to answer it.

23 Q. Why not?

24 A. It's an area that I don't -- I'm not involved
25 in. There are so many issues in this particular

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1 statement, I don't know how to answer it.

2 Q. Well what are the issues that you believe are in
3 this statement that make it difficult for you to
4 answer that question?

5 A. This statement is saying that -- it assumes that
6 there would be goals that would be set for the
7 reduction of youth smoking initiation, and failure to
8 meet those goals --

9 Q. Should carry penalties for the tobacco industry.

10 A. -- should carry penalties for the tobacco
11 industry and there should be strong incentives for
12 compliance by the tobacco industry. See, the
13 compliance is, again, a legal issue. Penalizing
14 somebody for not achieving a set of goals, that's not
15 a scientific statement, it's not a statement that I
16 know how to respond to either scientifically or
17 personally.

18 Q. Okay. You --

19 But you can't respond to that even on a personal
20 basis; is that right, doctor?

21 A. No.

22 Q. Okay. Yes, I'm right, or no, you can't?

23 A. You're correct, I cannot respond to it --

24 Q. Okay.

25 A. -- on a personal level --

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- 1 Q. Fine.
- 2 A. -- because I'm not quite sure what that means.
- 3 Q. Well you've agreed that we should reduce the
- 4 rate of youth initiation in tobacco use. You've told
- 5 me that; right?
- 6 A. Yes. I think that's --
- 7 Q. And now we're trying to get there. You
- 8 understand that?
- 9 A. Yes.
- 10 Q. Okay. And one of the --
- 11 One of the ways of getting there, according to
- 12 the statement, is that strong incentives should be
- 13 built in for compliance by the tobacco industry. If
- 14 they don't comply, they ought to be penalized. You
- 15 understand that; don't you?
- 16 A. Yeah. But I don't understand what --
- 17 What does "compliance" mean? Comply with what?
- 18 Q. The lower rates of youth initiation of tobacco
- 19 use. Cutting back on tobacco use by children is what
- 20 the goal is striving for, doctor.
- 21 A. Well like I say, and what does that have to do
- 22 with penalizing somebody? "Penalizing" is a term
- 23 that is more of a legal term than anything else.
- 24 Q. Okay. So you can't --
- 25 A. I assume, like I say, they're setting a set of

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1 goals and they're suggesting penalizing the tobacco
2 industry because the goals are not met. I'm just
3 saying that I don't quite understand how that would
4 be done. I'm not an attorney. It seems to me that
5 that's a legal issue, --
6 Q. Well you don't have --
7 A. -- not a scientific issue.
8 Q. You don't have to answer either as a scientist
9 or an attorney, doctor.
10 A. Well personally I don't understand it.
11 Q. Okay. You see the second item there, quote,
12 "The price of tobacco products must be increased
13 substantially and immediately," unquote. Do you
14 agree with that?
15 A. Again, I don't know how to respond to that. I'm
16 not an economist, and I'm not sure what the intention
17 is here.
18 Q. Doctor, the intention is if you raise the price
19 of cigarettes, people will buy fewer cigarettes,
20 consumption will go down. Do you think that --
21 And you think that's a worthy goal; don't you?
22 A. I think it's a worthy goal to reduce the amount
23 of smoking within the population.
24 Q. And if raising the price of cigarettes would
25 lower, reduce the amount of smoking in the

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1 population, would you then say that you would be in
2 favor of raising the price of cigarettes?

3 A. Assuming that that would lead to lower
4 consumption of tobacco, would reduce the risk to the
5 public, then I think that would be a worthy goal.

6 Q. So in that instance you would agree that the
7 price of tobacco products must be increased
8 substantially.

9 A. Well like I say, I don't know in what context
10 this is done. Must put some specific connotation to
11 this. But I agree that it appears if you increase
12 the price of tobacco products, it would decrease
13 consumption, and I think that's a worthy public
14 health goal.

15 Q. On the next page, doctor, are you familiar with
16 the italicized portion of that first paragraph that
17 says, quote, "Healthy People 2000," unquote?

18 A. I have seen a report called "Healthy People
19 2000" -- or it's not a report, it's -- it's a policy
20 initiative, I guess, is what they would call that.

21 Q. With the National Academy of Sciences?

22 A. No. That's --

23 If I'm not mistaken, that's the Public Health
24 Service. And that's part of what was developed by
25 the White House and the executive branch.

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1 Q. Have you ever had any input with respect to
2 "Healthy People 2000"?

3 A. No.

4 Q. Have you ever discussed "Healthy People 2000"
5 with anybody?

6 A. I was on a panel discussion of food consumption
7 issues and such things as fat in the diet and so
8 forth, and we did talk some about "Healthy People
9 2000" as a policy statement.

10 Q. Have you ever talked to anybody about "Healthy
11 People 2000" in the context of tobacco or cigarette
12 smoking?

13 A. No.

14 Q. Number three on Exhibit 1410 says, quote, "The
15 federal preemption of state and local regulation of
16 advertising and promotion must be repealed," unquote.
17 Do you agree or disagree with that, doctor?

18 A. I don't even know what those regulations are. I
19 don't know how to respond to that. That's beyond my
20 knowledge.

21 Q. Why don't you review that paragraph and then
22 tell me when you're done. Just paragraph three, both
23 the bold type and the not-so-bold type.

24 Have you --

25 A. Yeah, I've finished reading it.

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1 Q. Do you agree that state and local communities
2 ought to be able to regulate cigarette advertising
3 and have stronger restrictions than the federal
4 government, doctor?

5 A. This is not an area that I know very much
6 about. This is basically saying that, on the local
7 and community level, that regulations and laws could
8 be more effective, in this case, reducing smoking
9 than on a federal level. I don't know if that's the
10 case. I -- like I say, it's -- it's outside of my
11 knowledge either as a professional or an individual.
12 I've not been involved that much in state and local
13 laws; most of the work I've actually done has been on
14 federal laws.

15 Q. Well doctor, if the city of McLean, Virginia had
16 the right to restrict advertising of tobacco products
17 in a way that was more restrictive than the federal
18 government, and it could be shown that that would cut
19 down on consumption of tobacco products in McLean,
20 Virginia, would you support that?

21 A. That's a supposition that you're proposing. If
22 that were the case, I would agree with it from the
23 standpoint that I would agree with the intent to
24 reduce the consumption of alcohol products -- ah,
25 tobacco products.

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1 Q. Let's go on to the next, number four, doctor,
2 "FDA regulation of tobacco products must be
3 strengthened." Do you agree that the federal drug --
4 the Food and Drug Administration should regulate
5 tobacco products?

6 A. Well I know from the newspapers this has been a
7 major debate.

8 If I may, may I read this?

9 Q. Sure.

10 A. Okay.

11 Q. Doctor, do you believe that the federal -- the
12 Food and Drug Administration should regulate tobacco
13 products?

14 A. I don't know. I don't know if they -- they have
15 any regulatory authority currently for tobacco
16 products.

17 Q. Well if they don't have any regulatory authority
18 right now, do you believe that the Food and Drug
19 Administration should have regulatory authority over
20 tobacco products?

21 A. I don't know. I don't know the issues
22 involved.

23 The first sentence in here deals with regulating
24 tobacco products as a nicotine-delivery device. Food
25 and Drug Administration, I'm familiar with medical

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1 devices within FDA, and I don't know if this is an
2 appropriate thing for FDA to do or not. I -- I don't
3 know how to answer your question in that I don't know
4 how this would fit within their mandate.

5 Q. Do you agree that a cigarette is a
6 nicotine-delivery device?

7 A. People receive nicotine, but whether it's a
8 delivery device I think is another question.

9 Q. Well what do you think? Do you think that a
10 cigarette is a nicotine-delivery device?

11 A. Depends on how you define a delivery device. I
12 think that's probably part of the issue of this.

13 I had a hand -- I had a -- a sandwich for lunch
14 which has turkey in it, and is that sandwich a
15 delivery device for turkey? I don't know. Depends
16 on how you define turkey. Nicotine is naturally
17 occurring, and so is turkey naturally occurring, so
18 it --

19 That's part of the difficulty in trying to
20 respond to your questions about the Food and Drug
21 Administration regulating tobacco products. I'm not
22 that -- I'm not sufficiently familiar with what they
23 have done with other types of medical devices to know
24 if this would fit reasonably within their mandate, it
25 would be appropriate, or it would even be worthwhile.

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- 1 Q. Well let's assume --
- 2 A. So I don't know how to respond.
- 3 Q. Well let's assume for the moment, just for the
- 4 sake of this argument, that it's not within their
- 5 present statutory right; that is, the Food and Drug
- 6 Administration doesn't have -- does not have the
- 7 right to regulate tobacco products. Do you believe
- 8 the United States Congress should give the Food and
- 9 Drug Administration the right to regulate tobacco
- 10 products as nicotine-delivery devices?
- 11 A. I don't know.
- 12 Q. Doctor, is your home smoke-free?
- 13 A. For the most part.
- 14 Q. Do you allow your son to smoke in the home?
- 15 A. No.
- 16 Q. Do you do that for health purposes?
- 17 A. We don't like the odor of smoke in the house
- 18 because nobody else smokes.
- 19 Q. Do you have a smoke-free office?
- 20 A. Yes, the office is smoke-free.
- 21 Q. So you don't allow people to smoke in your
- 22 office; do you?
- 23 A. The office is smoke-free because of the mandates
- 24 within Virginia that specify that they're to be
- 25 smoke-free. It -- it -- we don't have any control

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1 over that.

2 Q. In the state of Virginia, all office buildings
3 are smoke-free; is that right, doctor?

4 A. Where there's public spaces, as far as I'm
5 aware.

6 Q. If you didn't have a state law in Virginia
7 mandating smoke-free offices, would you nonetheless
8 voluntarily make your office smoke-free and not allow
9 people to smoke therein?

10 A. I don't know. I've been in charge of other
11 offices where I have allowed people to smoke in the
12 past, but I don't -- I can't answer that question. I
13 don't know.

14 Q. Doctor, if you turn the page in Exhibit 1410,
15 apparently these were some more authors that I
16 neglected to ask you about in the beginning.

17 Do you know Robert W. Day?

18 A. I've met Robert Day.

19 Q. Is he a preeminent scientist in his field?

20 A. I assume so.

21 Q. Do you know what his field is?

22 A. No.

23 Q. Do you know Kathleen Foley?

24 A. Yes, I've met Kathleen Foley.

25 Q. Is she a preeminent scientist in her field of

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- 1 endeavor?
- 2 A. Yes, I believe so.
- 3 Q. Do you know what that field is?
- 4 A. I believe it's public health and nursing.
- 5 Q. Do you know Bertha Ford?
- 6 A. No, I don't know Bertha Ford.
- 7 Q. Do you know Ellen Gritz?
- 8 A. I've met Ellen Gritz.
- 9 Q. Is she a preeminent person in her field of
- 10 scientific specialty?
- 11 A. I assume so. I don't know her very well.
- 12 Q. Do you know what her specialty is?
- 13 A. No.
- 14 Q. Do you know Elizabeth Hart?
- 15 A. I've met Elizabeth Hart.
- 16 Q. Is she preeminent in her scientific field?
- 17 A. Yes.
- 18 Q. Do you know what it is?
- 19 A. No.
- 20 Q. Do you know John Laszlo?
- 21 A. Yes, I know John Laszlo.
- 22 Q. Is he a preeminent person in his field of
- 23 scientific specialty?
- 24 A. Yes.
- 25 Q. Do you know what it is?

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- 1 A. I believe it's statistics and epidemiology.
- 2 Q. Do you know Daniel Nathans?
- 3 A. Yes.
- 4 Q. Is he a preeminent person in his field of
- 5 scientific specialty?
- 6 A. Yes.
- 7 Q. Do you know what it is?
- 8 A. I believe it's public health and the law.
- 9 Q. I think we've discussed the next person.
- 10 Amelie Ramirez, do you know her?
- 11 A. No.
- 12 Q. Do you know John Seffrin?
- 13 A. I've met Dr. Seffrin.
- 14 Q. Is he a preeminent person in his scientific
- 15 field?
- 16 A. Yes.
- 17 Q. Do you know what it is?
- 18 A. He's a physician.
- 19 Q. Ellen Stovall, do you know her?
- 20 A. I've met her. I don't know her very well.
- 21 Q. Is she a preeminent person in her field of
- 22 scientific specialty?
- 23 A. I assume so.
- 24 Q. Do you know what it is?
- 25 A. Not offhand.

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- 1 Q. Do you know Frances Visco?
- 2 A. No.
- 3 Q. Do you know Judith Wagner?
- 4 A. I've met Judith Wagner.
- 5 Q. Is she a preeminent person in her field of
- 6 scientific specialty?
- 7 A. Yes.
- 8 Q. Do you know what it is?
- 9 A. I don't remember.
- 10 Q. Do you know Robert Young?
- 11 A. Yes.
- 12 Q. Is he a preeminent person in his scientific
- 13 field?
- 14 A. Yes.
- 15 Q. Do you know what it is?
- 16 A. It's public health.
- 17 Q. Let's go back to the previous page for just a
- 18 moment. Paragraph five, doctor, the bold type. Do
- 19 you believe that the federal government should study,
- 20 monitor, and evaluate tobacco control measures?
- 21 A. Yes.
- 22 MR. KAYSER: I'd like to have the court
- 23 reporter mark this as Exhibit -- Plaintiffs' Exhibit
- 24 1411, please.
- 25 (Plaintiffs' Exhibit 1411 was marked

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1 for identification.)

2 BY MR. KAYSER:

3 Q. Doctor, I'm showing you what has been marked as
4 Plaintiffs' Exhibit 1411. This is page 29 of
5 "Growing Up Tobacco Free", and I --

6 You may have answered this before, but let's do
7 it in the context of this publication from the
8 National Academy of Sciences. The first sentence
9 says, "Cigarettes and other forms of tobacco are
10 addicting." Do you agree with that or disagree with
11 that?

12 A. I don't know. I haven't looked at that issue.

13 Q. You've never, in all the years that you have
14 been involved in tobacco and cancer, you've never
15 discussed the issue or -- or looked into the issue of
16 addiction?

17 A. Not for cigarettes.

18 Q. What have you looked at with respect to
19 addiction, doctor, if not cigarettes?

20 A. I did work several years ago on addiction to
21 narcotic materials, barbiturates, addiction to some
22 pharmaceutical agents, mostly pharmaceuticals that
23 were used for treating particular diseases, and some
24 what would be called street drugs.

25 Q. But you never looked at tobacco?

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1 A. No, I've never looked at tobacco or nicotine.

2 MR. KAYSER: Can we go off the record for a
3 moment?

4 (Discussion off the record.)

5 (Plaintiffs' Exhibit 1412 was marked
6 for identification.)

7 BY MR. KAYSER:

8 Q. Doctor, I'm showing you what has been marked as
9 Plaintiffs' Exhibit 1412, which is a "Background
10 Paper on Tobacco Control."

11 Do you recognize the letterhead of the National
12 Academy of Sciences and related organizations?

13 A. Yes.

14 Q. Now the first -- very first sentence points out
15 that "This background paper does not represent the
16 views of the National Cancer Policy Board, and has
17 not been reviewed or approved by the Institute of
18 Medicine or National Research Council." Do you see
19 that?

20 First paragraph at the top of the page.

21 A. Oh, I see. Yes.

22 Q. Okay. In that same top paragraph or page of --
23 paragraph at the top of the page, do you know Robert
24 Cook-Deegan?

25 A. Like I say, I believe I've met him, but I don't

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- 1 know him well. He's in the Institute of Medicine.
- 2 Q. Is he a preeminent person in his field of
- 3 scientific specialty?
- 4 A. I assume so.
- 5 Q. Do you know Jane Durch?
- 6 A. Yes, I do.
- 7 Q. Do you know what her field of specialty is?
- 8 A. I believe it's public health, but I'm not sure.
- 9 Q. Is she a preeminent person in the field of
- 10 public health?
- 11 A. I assume so.
- 12 Q. Do you know Catharyn Livermore -- Liverman?
- 13 A. I've met her.
- 14 Q. What's her area of specialty?
- 15 A. I don't know.
- 16 Q. Is she a preeminent person in whatever her area
- 17 of specialty is?
- 18 A. I assume so.
- 19 Q. Do you know Michael Stoto or Stoto?
- 20 A. Stoto. Yes, I do.
- 21 Q. What's his area?
- 22 A. I think he's a statistician.
- 23 Q. Is he preeminent in the field of statistics?
- 24 A. Yes.
- 25 Q. Do you know Stacey Patmore?

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1 A. Yes, I do.

2 Q. What does she do?

3 A. She's one of the people that works in the
4 Institute of Medicine. I don't know what her
5 background is.

6 Q. Is she a scientific person?

7 A. I'm not sure.

8 Q. Do you know Kathleen McCormick -- or I'm sorry,
9 McCormally?

10 A. No, I don't believe so.

11 Q. You'll note that the letter -- or the background
12 paper, I'm sorry, states that in March and April of
13 1997 the National Cancer Policy Board decided to make
14 its first policy statement on tobacco control. Do
15 you see that?

16 A. Uh-huh.

17 THE REPORTER: Your answer?

18 THE WITNESS: Yes.

19 Q. And it says that one of the reasons that the
20 Cancer Board did that is because tobacco use is the
21 single most important cause of cancer in the nation.
22 Do you agree with that?

23 A. As I indicated previously, I have a problem with
24 the use of "cause" in this context. Since this is a
25 policy statement, you know, they have used it to

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1 indicate that it's a significant risk, and I would
2 agree with the fact that it's a significant risk of
3 cancer.

4 Q. You believe tobacco is a significant risk of
5 getting cancer, sir?

6 A. Like I say, that's what the epidemiologic
7 studies tell us, that there's -- it's a major risk
8 factor.

9 Q. Well I want to know what you believe. Do you
10 believe that cigarette smoking is a significant --
11 you used the word "major."

12 Do you believe that cigarette smoking is a major
13 risk factor for cancer?

14 A. Yes.

15 Q. Were you asked to be on any of the workshops
16 that the National Academy of Sciences and/or the
17 Institute of Medicine put together with respect to
18 tobacco matters in the last couple of years, doctor?

19 A. I attended some workshops. I don't know if this
20 was one or not.

21 Q. Well have you attended workshops under the
22 auspices of the National Academy of Sciences dealing
23 with tobacco control?

24 A. Yes.

25 Q. When?

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- 1 A. I don't know the exact dates.
- 2 Q. Give me the years.
- 3 A. I believe there was one in '94 and there was one
- 4 about '91.
- 5 Q. Where were these held, sir? Tell me --
- 6 Well let's start with the one in '91. Where was
- 7 that panel held?
- 8 A. It was within the Institute of Medicine.
- 9 Q. Where?
- 10 A. At the National Academy of Sciences.
- 11 Q. Tell me the city.
- 12 A. Washington, D.C.
- 13 Q. And 1994, where was that?
- 14 A. That was also the Institute of Medicine,
- 15 National Academy of Sciences, Washington, D.C.
- 16 Q. What was the subject of the panel discussion in
- 17 1991?
- 18 A. I don't remember.
- 19 Q. Well you were talking about cigarette smoking;
- 20 right?
- 21 A. It was talking about cigarette smoking.
- 22 Q. What contribution did you make to the
- 23 discussion?
- 24 A. I don't remember.
- 25 Q. Did you make a contribution to the discussion?

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1 A. I don't remember if I made any presentations or
2 not. As far as I remember, I didn't.

3 Q. What was your purpose for being there?

4 A. I'm a -- was a principal scientist at the
5 National Academy of Sciences and was a director of a
6 large division, and we often worked with the
7 Institute of Medicine and we attended each other's
8 meetings. So when there were workshops held, I was
9 normally invited to those workshops and attended many
10 of them.

11 Q. Well in 1991 did you tell the group that was
12 assembled that you didn't believe that cigarette
13 smoking caused cancer?

14 A. Like I say, I don't -- don't remember if I made
15 even any presentation at all. I don't remember what
16 the -- the specific topic of the workshop was.

17 Q. Do you remember anything about the workshop at
18 all?

19 A. As I remember, it dealt with various risks in
20 public health. Cigarette smoke was not the only one.

21 Q. Do you remember anything about -- other than
22 what you've told me about that workshop in 1991?

23 A. Well there were several people invited, and
24 there were maybe 30 people present for a panel-type
25 discussion.

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1 Q. Do you remember anything that was discussed in
2 1991 at that panel?

3 A. It was a discussion of, like I say, the relative
4 risks of -- of various exposures and activities of
5 individuals within the population, such as driving
6 cars, pharmaceuticals, how these materials are
7 controlled.

8 I do actually remember making a presentation now
9 to that group.

10 Q. What did you make it about? Just tell me the
11 subject.

12 A. It is --

13 To the best of my memory, the subject dealt with
14 risk-assessment approaches to defining public health
15 problems and issues.

16 Q. Was cigarette smoking a part of your
17 presentation?

18 A. I don't believe so.

19 Q. There was another workshop, you say, in 1994?

20 A. Yes, there was another workshop in 1994.

21 Q. What was the subject of that workshop?

22 A. Again, that dealt with tobacco use. As I
23 remember, to the best of my recollection -- my
24 recollection, that dealt with use among young people
25 of tobacco.

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1 Q. How many people were at that workshop?

2 A. If I remember right, that was 50 to 75 people.

3 Q. Did you participate in the discussion in 1994?

4 A. No, not directly.

5 Q. Did you participate indirectly?

6 A. If I remember right, I asked some questions.

7 Q. What did you ask questions about in 1994,

8 doctor?

9 A. Well these were scientific discussions, and I
10 was asking questions concerning use of some technical
11 aspect of the presentation, either statistics or
12 pathology or toxicology. The specific question I
13 don't remember.

14 Q. Do you remember the question you asked
15 generally, if not specifically?

16 A. No.

17 Q. Did you ask a question about tobacco control?

18 A. No, I don't know.

19 (Plaintiffs' Exhibit 1413 was marked
20 for identification.)

21 BY MR. KAYSER:

22 Q. Doctor, I'm showing you what has been marked as
23 Plaintiffs' Exhibit 1413, pages 105 and 106. Again,
24 this is from "Growing Up Tobacco Free", a book
25 published under the auspices of the National Academy

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1 of Sciences.

2 Why don't you just read the first page for me,

3 doctor.

4 A. "INTRODUCTION: MAINTAINING THE MARKET?"

5 Q. That's it.

6 A. Is that --

7 Q. That's it.

8 A. "Every day, children and youths" --

9 Q. Excuse me, doctor. To yourself.

10 A. Oh.

11 Q. Tell me when you're done.

12 A. I was going to say --

13 Okay. I've read down to the last full sentence.

14 Q. Okay. Doctor, do you believe that the tobacco

15 industry has targeted young people, trying to induce

16 them to smoke through their advertising?

17 A. I don't know.

18 Q. Have you ever considered the fact that the

19 tobacco industry is trying to induce young people to

20 smoke through advertising?

21 A. Like I say, I -- I don't know. I'm not really

22 very familiar with advertising or what's conducted

23 through advertising. It's not an area that I work

24 in.

25 Q. Doctor, you have five children; is that right?

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- 1 A. Yes.
- 2 Q. Those children have all been growing up in the
- 3 last two decades plus; isn't that right?
- 4 A. That's correct.
- 5 Q. There's been a lot of discussion and you've been
- 6 involved in a lot of research with respect to the ill
- 7 health effects of cigarette smoking; isn't that
- 8 right?
- 9 A. I've done a lot of research on pulmonary
- 10 diseases, not just cigarette smoking.
- 11 Q. But that's one of the things you've been
- 12 involved in.
- 13 A. That's correct.
- 14 Q. And you're familiar with the major risk factors
- 15 of cigarette smoking; are you not?
- 16 A. Yes.
- 17 Q. And you have a healthy concern for your
- 18 children; don't you?
- 19 A. Yes.
- 20 Q. You don't want your children to smoke; do you?
- 21 A. No, I do not want my children to smoke.
- 22 Q. One of the reasons you don't want your children
- 23 to smoke, you mentioned the religious aspect of it.
- 24 Another reason you don't want your children to smoke
- 25 is because smoking is unhealthy; is that right?

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1 A. I would like to see them reduce their risks and
2 be healthier.

3 Q. Pardon me?

4 A. I'd like to see them reduce their risks as much
5 as possible.

6 Q. "And be healthier" you said?

7 A. You know, that's part of reducing risks in life,
8 is to try to live a healthier life.

9 Q. And part of leading a healthier life is not
10 smoking; is that right, sir?

11 A. Well the -- like I say, we don't --

12 The way the statistics has been developed from
13 epidemiologic studies, we don't know about any
14 specific individual, but as an overall population we
15 know that it's a major risk, so --

16 Q. Cigarette smoking is a major health risk; isn't
17 it, doctor?

18 A. It's a -- it's a --

19 It's a major risk factor.

20 Q. Major health risk factor; isn't it, sir?

21 A. Well health risk factor.

22 Q. Cigarette smoking is; isn't it, doctor?

23 A. Yes.

24 Q. So if cigarette companies are targeting young
25 people, trying to induce them to smoke through

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1 advertising, wouldn't that offend you?

2 A. I would not want to see cigarette smoke --
3 cigarette companies targeting my children. But like
4 I say, I don't know if they do that. I don't know
5 enough about advertising to know if that's even done.

6 Q. Well weren't you concerned about that --
7 Well you still have children growing up.

8 A. Yes.

9 Q. Different ages. Aren't you concerned about
10 cigarette companies targeting your children, trying
11 to get them to smoke?

12 A. My children have not seemed to have had too much
13 problem in dealing with that issue, so I haven't been
14 very concerned about that. They know how we feel
15 within our family, and basically all except for one
16 don't smoke.

17 Q. How about the other children of your friends who
18 may not have the same strong support. Wouldn't you
19 be concerned that the other friends of your family's,
20 children of your friends, might be targeted by the
21 cigarette companies? Wouldn't that bother you,
22 through advertising for smoking?

23 A. Well you're making --

24 It would bother me if a company is targeting
25 children to try to induce them into a set of

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1 activities that put them at increased risk of
2 disease. My response, though, is I don't know if
3 that's being done or to what extent that's being done
4 in that I don't know anything about advertising or
5 how it's -- it's carried on.

6 Q. Have you ever seen the cartoon character Joe
7 Camel?

8 A. I think I've seen him on billboards.

9 Q. Do you think that Joe Camel is an advertising --
10 advertisement that's aimed at children?

11 A. I don't know that.

12 Q. Have you ever read that more young people
13 recognize Joe Camel than Mickey Mouse?

14 A. I may have. I don't know.

15 Q. Doctor, as I recall your testimony in
16 Mississippi, I believe you testified that it's not
17 possible to make a safer cigarette. Is that your
18 view?

19 If you'd like a specific page reference, why
20 don't you turn to page 102 of Exhibit 1400. Page
21 102, line six through -- lines six through nine. Do
22 you see that?

23 A. Yes.

24 Q. Let me ask you the same question the questioner
25 there did, sir: Is it possible to make a safer

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1 cigarette?

2 A. I'd have to answer it the same way I did there.

3 Because we don't have a current laboratory animal

4 model or a model that we can do testing to be able to

5 rank or quantify the differences from one cigarette

6 to the other, I don't think we can make a safer

7 cigarette or a less hazardous cigarette.

8 Q. Are they experimenting with animal models to try

9 to make a safer cigarette, to your knowledge, sir?

10 A. There is ongoing work now to -- to try to -- as

11 there has been for years -- to try to develop

12 laboratory animal models that will reflect a less

13 hazardous cigarette.

14 Q. Who is doing that?

15 A. Well the cigarette companies have done it in the

16 past, as has the federal government. The National

17 Cancer Institute had a program for several years to

18 try to develop a less hazardous cigarette.

19 Q. Which cigarette companies tried to do that, sir?

20 A. Well R. J. Reynolds, I remember a program to --

21 to develop a less hazardous cigarette, and from what

22 I remember of its --

23 Well they had a program. I don't know very much

24 about what happened to the program.

25 Q. Did you participate in any of those programs

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1 that you've just described, doctor?

2 A. When R. J. Reynolds was making presentations to
3 scientists about the results of some of their
4 studies, I was one of the scientists that was
5 involved in those presentations.

6 Q. You were employed by the R. J. Reynolds Company?

7 A. I don't think so. No, I was not. I was invited
8 to the presentation, and I frankly don't remember if
9 there were expenses or if there were expenses that
10 were paid or who paid those. That has been several
11 years ago.

12 Q. When was that presentation made, doctor?

13 A. Like I say, it was several years ago. I don't
14 remember. It's --

15 As I get older, I'm not as good on dates. So it
16 could have been five years, it could have been eight
17 years ago.

18 Q. Do you know where the presentation was made?

19 A. It was made in North Carolina at an auditorium,
20 I believe -- it was either by or part of the R. J.
21 Reynolds facility in Winston-Salem.

22 Q. What was your role in the presentation?

23 A. I was one of about -- and this is based on my
24 recollection -- one of about 30 scientists that were
25 invited in to review a set of studies that had been

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1 conducted and to provide basically peer review

2 comments.

3 Q. Are these comments recorded anywhere?

4 A. I don't know.

5 Q. What comments did you provide?

6 A. It's been too long ago. I do a lot of peer
7 review of materials, papers and so forth, so I don't
8 remember the specifics. But I do remember that I --
9 I had a group of -- of laboratory studies that I
10 believe I reviewed at the meeting itself, and then
11 there were discussions of those, and I provided
12 comments on the techniques that were used, the types
13 of models that were being used, and the results,
14 whether I thought the results were -- were justified
15 based on the models or not justified. But as to the
16 specifics, I couldn't tell you that.

17 Q. Do you remember what the results were in that
18 presentation?

19 A. No.

20 Q. Doctor, you said that you participated in a lot
21 of peer reviews.

22 A. Yes.

23 Q. What's the purpose of a peer review, doctor?

24 A. Often an agency, a federal agency or another
25 organization, will invite -- such as the National

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1 Academy of Sciences -- will invite a group of
2 scientists in in a specific area and ask them to
3 review a set of -- of scientific studies or related
4 documents, and then to comment on those documents
5 whether they feel the studies were conducted in a
6 valid manner. There are such things as laboratory
7 examinations and certifications where laboratories
8 are visited as well. But in just dealing with
9 documents, the scientists provide comments as to
10 whether the studies are done properly.

11 Q. I'm sorry, I didn't hear that.

12 A. Whether the studies are conducted properly.

13 Sometimes a peer review on a study will go
14 over -- let's say it's a chronic inhalation study.
15 May be invited to come in and -- and review the
16 studies at three different stages along the study to
17 see how it's being conducted, and they may make
18 modifications based on peer review comments.

19 Q. What's the purpose of peer review, doctor?

20 A. It's to get outside opinions from experts in the
21 area to improve the science.

22 Q. To make sure whatever presentation is being made
23 is accurate?

24 A. To make sure that the studies are being done
25 properly and that the results of the studies are

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1 being accurately presented.

2 Q. And a peer review study is a pretty rigorous
3 exercise with respect to the people who are doing it;
4 isn't it?

5 A. Yes.

6 Q. And it's to ensure that the study itself and the
7 conclusions thereof are as scientifically accurate as
8 possible; isn't that right?

9 A. Yes.

10 Q. And the peer review folks who are doing the peer
11 review are very critical and try to be very critical
12 of whatever's being presented to them; isn't that
13 right? I don't mean that in a bad way, but they're
14 looking for flaws and --

15 A. They're trying to be scientifically critical.

16 Q. Okay. And that's to strengthen the overall
17 scientific process; isn't that right?

18 A. That's correct.

19 Q. Doctor, I'd like to have you take a look at
20 Exhibit 1400, page 70.

21 MR. KAYSER: Can we go off the record for a
22 minute?

23 (Discussion off the record.)

24 BY MR. KAYSER:

25 Q. Doctor, taking a look at page 70, line 12 --

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1 well let's start on line ten on page 70. The
2 question was asked of you, "Do you know of any
3 substances that do cause lung cancer?" And your
4 answer, "There's a host of materials that cause lung
5 cancer." See that?

6 A. Yes.

7 Q. Is that your testimony here today, there are a
8 host of materials that cause lung cancer?

9 A. Uh-huh. Quite a few materials that have been
10 shown to cause lung cancer.

11 Q. And you name some of them here.

12 A. Yes.

13 Q. You say one of them, the materials that cause
14 lung cancer, is nickel; isn't that right?

15 A. That's correct.

16 Q. Another material that causes lung cancer is
17 nickel carbonate; is that right?

18 A. I believe nickel carbonate is one that in an
19 occupational setting has been shown to.

20 Q. And can you tell me any other materials that
21 cause lung cancer, sir?

22 A. Well there's chromium.

23 Q. Okay. Anything else?

24 A. Like I say, I mentioned metals here.

25 Q. Yeah.

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- 1 A. There's still some debate that arsenic appears
2 to cause lung cancer as well. But like I say,
3 there's still some debate on whether that's true.
- 4 Q. Okay.
- 5 A. Cadmium.
- 6 Q. All right.
- 7 A. And then there's other materials other than the
8 metals. Those are some of the metals.
- 9 Q. Name some others.
- 10 A. Asbestos.
- 11 Q. Any others?
- 12 Asbestos causes lung cancer, doctor; is that
13 right?
- 14 A. Yes.
- 15 Q. Any others?
- 16 A. Diesel exhaust now has been shown to, both in
17 laboratory animal models and in epidemiologic
18 studies.
- 19 Q. Any others?
- 20 A. There are some hormones that have shown lung
21 cancer, mainly in workers, an increase in lung
22 cancer. And some of these have been successful
23 animal models, some have not been.
- 24 Q. Do you know of any animal studies that show
25 asbestos causing cancer, doctor?

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- 1 A. Yes. There are laboratory animal studies on
2 asbestos being a causal --
- 3 Q. Have those been reported in any peer reviewed
4 journals?
- 5 A. I assume so. I haven't looked at that for a
6 while. But I've worked on two or three reports in
7 the past --
- 8 Q. You have personally?
- 9 A. -- that deal with that.
10 Yes, I have personally.
- 11 Q. Where you conducted the animal studies?
- 12 A. No.
- 13 Q. Can you tell me where the studies are reported,
14 doctor, that say that asbestos causes cancer; that
15 is, where are the animal studies reported that say
16 that asbestos causes cancer?
- 17 A. Not offhand.
- 18 Q. Well you say you contributed to them; is that
19 right?
- 20 A. No, I did not contribute --
- 21 Q. I'm sorry.
- 22 A. -- to the studies.
- 23 Q. Did you review those studies?
- 24 A. These were studies that were used in the
25 preparation of other studies that I was involved in

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1 that dealt specifically with asbestos as a cause of
2 cancer.

3 Q. And you were involved in certain studies that
4 showed that asbestos causes cancer; is that right?

5 A. These were review studies that used the
6 laboratory animal studies as information.

7 Q. Well where were your studies published when you
8 were studying whether asbestos causes cancer?

9 A. Let's see, one of the studies was by the
10 National Academy of Sciences.

11 Q. Is that published in a peer review journal,
12 doctor?

13 A. That was published as a report of the National
14 Academy of Sciences.

15 Q. Peer review journal, sir?

16 A. Well that's -- that's --

17 As you pointed out, it goes through a peer
18 review process.

19 Q. Did that particular paper of yours go through a
20 peer review process?

21 A. I was one of the writers of the report for the
22 National Academy. I didn't publish a separate paper.

23 Q. What was the name of the report that you helped
24 put together, and where is it?

25 A. The name of the report was "Non-Asbestosform

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1 Fibers," and that is on my curriculum vitae. I don't
2 remember the year it was published. It was back in
3 the mid-'80s, 1980s.

4 Q. Do you have a copy of it at home or at your
5 office?

6 A. I don't know. I probably do, but I'm not sure.

7 Q. Was there any other study you participated in
8 with respect to asbestos and cancer?

9 A. There's another study for the Department of
10 Defense that was done in the early 1980s.

11 Q. Did you participate in that?

12 A. Yes, I did.

13 Q. It was done for the Department of Defense you
14 say?

15 A. Yes.

16 Q. Were the results published in a peer review
17 journal?

18 A. The results of that were published in a report
19 to the Department of Defense from -- I believe it was
20 the MITRE Corporation or --

21 Q. The what?

22 A. MITRE Corporation or MIT Research. That's a
23 group that I worked for during that time period.

24 Q. Do you know what the name of that report is?

25 A. No. I'd have to go back and look. It's been

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1 too long ago.

2 Q. Do you know where that report is right now? Do
3 you have a copy of it?

4 A. I don't know. I probably do. I try to keep at
5 least one copy of those reports.

6 Q. Do you know of any animal study that shows that
7 nickel causes lung cancer, doctor?

8 A. Yes.

9 Q. Where is that study to be found?

10 A. The Committee on Toxicology of the National
11 Academy of Sciences I directed did a study on nickel,
12 and I believe it's one of the reports of the
13 Committee on Toxicology.

14 Q. That's an animal model study, doctor?

15 A. That included animal models, but the intention
16 of the study was to recommend acceptable exposures to
17 the Department of Defense for nickel.

18 Q. Well, was there an animal model study made that
19 demonstrated that nickel causes lung cancer?

20 A. Yes, there are positive laboratory animal
21 studies.

22 Q. And have those results been published in a peer
23 review journal?

24 A. To my knowledge they have been.

25 Q. Do you know which peer review journal?

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- 1 A. No.
- 2 Q. Are there animal studies, animal model studies
- 3 that show that cadmium causes lung cancer, doctor?
- 4 A. Yes, there are.
- 5 Q. Have those results been published in a peer
- 6 review journal?
- 7 A. I believe they have.
- 8 Q. Which one?
- 9 A. I don't know.
- 10 Q. Is there --
- 11 Are there animal model studies that show that
- 12 chromium causes lung cancer, doctor?
- 13 A. Yes.
- 14 Q. Have those results been published in a peer
- 15 review journal?
- 16 A. I assume they have.
- 17 Q. Do you know whether they have?
- 18 A. I don't know for certain that they have.
- 19 Q. Do you know who did the animal model studies?
- 20 A. Yes, I do.
- 21 Q. Who?
- 22 A. I can't think of his name. I'm sorry, I don't
- 23 remember his name.
- 24 Q. Do you know where the result -- where the
- 25 results were published for chromium?

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- 1 A. The results have been published for chromium.
- 2 Q. Do you know where?
- 3 A. No.
- 4 Q. Do you know who did the animal studies for
- 5 nickel?
- 6 A. No.
- 7 Q. Do you know of any animal model studies that
- 8 show that arsenic causes lung cancer?
- 9 A. I reviewed the laboratory animal studies for
- 10 arsenic. Yes, there are published studies for
- 11 arsenic for lung cancer.
- 12 Q. Where?
- 13 A. I don't know where they're at.
- 14 Q. When you say you reviewed those, did you review
- 15 those in a peer review capacity?
- 16 A. Are you referring to arsenic specifically, or to
- 17 all of the metals?
- 18 Q. Arsenic.
- 19 A. Arsenic, I was involved in the publication of a
- 20 report on arsenic as a carcinogen, and I was one of
- 21 the people that wrote the report, and that was
- 22 published by the National Academy of Sciences in one
- 23 of their reports.
- 24 Q. Do you know when that was published?
- 25 A. I don't know the date that it was published.

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- 1 Q. Give me the year.
- 2 A. I believe that's Volume 7 of the series
- 3 "Drinking Water and Health."
- 4 Q. What?
- 5 A. Volume 7 of the series "Drinking Water and
- 6 Health" that dealt with arsenic and drinking water.
- 7 And -- no, it was Volume 5. Not Volume 7, but Volume
- 8 5. Correct that. And that would mean that that was
- 9 published about 1984, 1985.
- 10 Q. Did you peer review any of these other animal
- 11 model studies that showed that any material causes
- 12 lung cancer?
- 13 A. I could very well have.
- 14 Q. Do you recall?
- 15 A. I've --
- 16 I have peer reviewed several articles that have
- 17 been published on chromium.
- 18 Q. Where have they --
- 19 Where were those published?
- 20 A. One was published in Toxicology and Applied
- 21 Pharmacology.
- 22 You asked for the name of the person on
- 23 chromium. That was Sunderman.
- 24 Q. S-u-n-d-e-r-m-a-n?
- 25 A. Yes.

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- 1 Q. A man or a woman?
- 2 A. It's a man.
- 3 Q. Where is Mr. Sunderman located?
- 4 A. I don't remember which university he's at.
- 5 Q. East Coast or West Coast?
- 6 A. No. East Coast, in the Connecticut area. I
- 7 think it's in -- it could be New York.
- 8 Q. Did you peer review any other animal model
- 9 studies with respect to any material causing lung
- 10 cancer or any other kind of cancer?
- 11 A. Yes.
- 12 Q. Tell me what they were.
- 13 A. Our review --
- 14 It's very difficult to give you specifics on
- 15 this because I review so many different articles in a
- 16 year's time; I would guess somewhere between 50 and
- 17 75 articles a year. And so over ten years, that's
- 18 750 articles. I was doing peer review on two
- 19 articles last night. So to recall one or the
- 20 other --
- 21 I would say that at least half of those
- 22 articles -- let's say in ten years it's 750
- 23 articles -- at least half of those -- pick a number,
- 24 400 -- dealt with some aspect of cancer. So to
- 25 recall any specific article, I'm not sure I can. I

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1 do peer review for a lot of journals.

2 Q. Doctor, do you know of any material other than
3 tobacco that is more closely associated with lung
4 cancer?

5 A. Well that's --

6 Associated by whom? I'm not -- it's a -- it's a
7 rather vague question. If you could ask the
8 question --

9 When you say "associate," you mean for
10 scientists associated with lung cancer, --

11 Q. Yeah. Yeah.

12 A. -- or for the public or --

13 Q. Well let's try both.

14 A. Well scientists have been interested for years
15 in looking at such things as radon and lung cancer,
16 and certainly asbestos and lung cancer. Cigarette
17 smoking and lung cancer, there were a lot of studies
18 on that. Chromium is another one that there's been a
19 lot of interest in in lung cancer. And probably the
20 other one just off the top of my head that I can
21 think of is arsenic.

22 Q. Well looking at the population of the United
23 States, sir, across the board, doctor, and the number
24 of people who may be exposed to arsenic and may be
25 exposed to asbestos and so forth, do you know of any

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1 other substance that carries a greater risk factor
2 for lung cancer than tobacco?

3 A. I think I already said that tobacco is a -- is a
4 major risk factor for lung cancer.

5 Q. You have said that.

6 A. Yes.

7 Q. I understand that.

8 Do you know of any other substance that is a
9 greater risk for lung cancer than tobacco?

10 A. Well in the cases of asbestos we're talking
11 about fairly limited exposure, where in the case of
12 tobacco we're talking about larger exposure. So
13 that's --

14 Q. Well that's what I am talking about.

15 A. So --

16 Q. Excuse me. Let me frame the question for you so
17 you understand the context of it.

18 A. That's what I'm trying to do.

19 Q. That's what I'm trying to do to be fair to you.
20 I'm trying to give you the context.

21 I'm asking you that with respect to the United
22 States population as a whole, broad-based population
23 of this country -- and I recognize there may be some
24 few people exposed to radon, some few people exposed
25 to chromium. We don't have too many chromium mines,

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1 I understand, in Minnesota -- but just sort of across
2 the board is what I'm talking about, being the
3 general population, do you know of any material that
4 is a greater risk factor for lung cancer than
5 tobacco?

6 A. Well the greatest exposure across society would
7 be to tobacco smoke.

8 Q. And do you know of any other material for that
9 across-the-board society that is a greater risk
10 factor for lung cancer than tobacco?

11 A. It's a major risk factor for lung cancer.

12 Q. Tobacco is.

13 A. Tobacco is.

14 Q. Okay. Do you know of any other material that is
15 a greater risk factor for lung cancer than tobacco
16 across the spectrum of the United States, the
17 population?

18 A. Well when we're talking about the number of
19 people potentially exposed, that's a large percentage
20 of the population.

21 Q. So for the largest --

22 A. So the answer is yes.

23 Q. What?

24 A. There's a large population that is exposed to
25 tobacco as opposed to other potential lung

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1 carcinogens, so the risk to that population is larger
2 than it would be to a smaller population.

3 Q. And for that large population of those exposed
4 to tobacco, for those folks, is there any other
5 material that is a greater risk to them of lung
6 cancer than tobacco?

7 A. No.

8 Q. Doctor, I'd like to have you kind of reflect
9 over the last 25 years in your work in the tobacco --
10 or with respect to lung cancer, carcinogenic agencies
11 and so forth. Can you cite any epidemiological study
12 of smoking and cancer in the past 25 years that does
13 not conclude that cigarette smoking causes lung
14 cancer?

15 MR. RYERSON: Objection as to form.

16 A. Can you restate your question? I'm not sure I
17 even understand your question.

18 Q. Well I will restate my question, and when I come
19 to a word you don't understand, stop me.

20 A. Okay.

21 Q. Doctor, I'd like to have you reflect over the
22 last 25 years in your work with respect to tobacco
23 and cancer, carcinogenic agencies and so forth. Can
24 you cite any epidemiological study of smoking and
25 cancer that does not conclude that cigarette smoking

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1 causes lung cancer?

2 A. Most studies have shown statistical
3 association. There are a few studies that show no
4 association, and I can't tell you what they are
5 today, but there are some studies that have not shown
6 association. But the majority of the epidemiologic
7 studies have.

8 Q. Well doctor, that was similar to the answer that
9 you gave in the Mississippi case, and just so I'm
10 totally fair with you, why don't you take a look at
11 Exhibit 1400 on page 191 and 192. And just take a
12 look at your answer there because I'm going to ask
13 you some questions about that where you say there are
14 some studies that did not -- very few studies that
15 didn't show that.

16 A. Well this is 191, 192?

17 Q. Right.

18 A. Okay.

19 I've read it.

20 Q. And so your testimony on March 26, 1997 is
21 obviously similar to what it is today; is that right?

22 A. Yes.

23 Q. Well since March 26, 1997 until today, in early
24 October 1997, did you try to find any of those few
25 studies that did not show the association between

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1 cigarette smoking and lung cancer?

2 A. No.

3 Q. Did you have any intellectual curiosity about

4 where those studies might be?

5 A. I've seen the studies, but I had other

6 activities and didn't go back and try to find those

7 studies.

8 Q. Do you have any idea where we might find those

9 studies?

10 A. They're in the scientific literature.

11 As I pointed out then, epidemiology is a

12 statistical science, and from time to time you -- you

13 have inconsistencies produced in studies.

14 Q. Doctor, I understand that you tell me that those

15 studies are in the scientific literature, but I -- as

16 you can appreciate, that's a kind of a broad pool to

17 be -- that I will have to go study. Can you narrow

18 it down for me a little bit as to where I might find

19 those studies over the last 25 years that did not

20 show the association between cigarette smoking and

21 cancer?

22 A. No, I can't tell you any specific journal. I

23 haven't gone back and looked myself.

24 Q. Where would you go look if you wanted to go find

25 those?

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1 A. Well one of the first places I would look would
2 be in my own files, because I have fairly extensive
3 files that -- that I've maintained over the years of
4 information on lung cancer, including epidemiologic
5 studies, and there I could certainly do a literature
6 search as well. There have been questions throughout
7 the last 25 years about how some epidemiologic
8 studies were analyzed and what the statistics meant
9 and why some studies failed to show the results we
10 expected, and that would be what I would look for.

11 Studies, as I indicated in that testimony,
12 majority of the studies have been positive, but there
13 have been some that have not shown an association.
14 And I think those could be found, but I haven't done
15 it.

16 Q. But let's narrow, then, the timeframe for the
17 last ten years, doctor. Any of those few studies
18 that do not show an association between cigarette
19 smoking and lung cancer, were any of those studies
20 done in the last ten years?

21 A. I don't know.

22 Q. Do you know whether in the last five years there
23 have been any studies, epidemiological studies that
24 fail to show an association between cigarette smoking
25 and lung cancer?

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1 A. I don't know. I would have to go back to look
2 and see.

3 Q. In the United States, do you believe that air
4 pollution causes lung cancer?

5 A. I believe that air pollution is one of the risk
6 factors for lung cancer.

7 Q. Do you know whether air pollution causes lung
8 cancer, doctor?

9 A. The laboratory animal studies that have looked
10 at air pollution have thus far been negative.

11 Q. Do you believe there are any reputable medical
12 professionals who believe that cigarette smoking
13 causes cancer?

14 A. Well again, we've talked about the use of the
15 very general term "cause" --

16 Q. I want to narrow it down for you, doctor. I
17 want to use "cause" in the scientific sense we've
18 been talking about during today, I don't -- not in
19 the policy-making sense that you're talking about,
20 but in the scientific sense that you've talked about.

21 Do you believe there are any reputable medical
22 professionals who believe cigarette smoking causes
23 cancer?

24 A. I wouldn't be surprised to know that there are
25 some that -- that believe that it causes cancer but

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1 may not be as familiar with the information as
2 others. And then people have their own opinions. I
3 certainly can't speak for other scientists, but I
4 wouldn't be too surprised; scientists often disagree
5 with one another.

6 Q. Do you know that there are reputable
7 toxicologists who believe that cigarette smoking
8 causes cancer, doctor?

9 A. I would be surprised if they were ones that had
10 looked at the laboratory animal studies and believed
11 that.

12 Q. Do you know of any reputable toxicologists who
13 believe that cigarette smoking causes cancer?

14 A. Not those that are familiar with the laboratory
15 animal studies.

16 Q. Do you know of any reputable toxicologists who
17 believe that cigarette smoking causes cancer?

18 A. No.

19 Q. Do you know of any reputable scientists other
20 than toxicologists who believe that cigarette smoking
21 causes cancer?

22 A. I'm sorry, I do not --

23 I didn't catch your question.

24 Q. Okay. Putting aside toxicologists for a moment,
25 not referring to toxicologists, do you know of any

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1 other reputable scientists who believe that cigarette
2 smoking causes cancer?

3 A. I don't know of any. That doesn't mean there
4 are not some, but I don't know of any.

5 Q. And putting aside toxicologists and certain
6 other scientists, do you know of any other -- do you
7 know of any medical doctors, reputable medical
8 doctors who believe that cigarette smoking causes
9 cancer?

10 A. I have seen statements by individuals.

11 Q. Doctor, you have to take your hand away from
12 your --

13 A. Sorry.

14 Q. Helping the court reporter.

15 A. I've seen statements by individuals who I don't
16 believe are that familiar with the laboratory animal
17 studies that have made statements, but as I
18 indicated, I don't know what their statements were
19 based on, and I don't even know how they were
20 defining "cause." So I believe that if scientists,
21 particularly toxicologists, pathologists, look
22 carefully at the laboratory animal studies, that they
23 would come to the same conclusion I have.

24 Q. You get a physical every year, doctor?

25 A. Pretty well every year.

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1 Q. You have a family doctor, an internist that you
2 go to?

3 A. Yes.

4 Q. Man or woman?

5 A. It's usually a man. There's also a woman in the
6 practice.

7 Q. When you go for your yearly physical, do they
8 ask you whether you smoke?

9 A. I don't believe so, actually.

10 Q. Well in talking to your doctor over the years
11 when you've gone in for a yearly physical, has your
12 doctor commented favorably upon the fact that you
13 don't smoke?

14 A. He may have. I don't remember. He knows me
15 well enough; he knows I don't smoke.

16 Q. Haven't you been complimented by your doctor in
17 the fact that you don't smoke, and that's much better
18 for your health that you don't smoke? Hasn't your
19 doctor told you that?

20 A. I don't think so.

21 (Recess taken.)

22 BY MR. KAYSER:

23 Q. Doctor, let's take a look at your report, which
24 is Exhibit 1401, page three, under "MECHANISMS OF
25 DISEASE." First paragraph under "MECHANISMS OF

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1 DISEASE," almost two-thirds of the way down the
2 paragraph, you talk about HNPCC. Do you see that,
3 sir?

4 A. Yes.

5 Q. What's the underlying biologic mechanism that
6 you refer to there?

7 A. HNPCC is a form of colo-rectal cancer that has a
8 series of six steps in the cancer process, and the
9 first step is the formation of the APC gene, which in
10 this case is inherited.

11 Q. Have you just told me the underlying biological
12 mechanism?

13 A. Yes.

14 Q. How was that determined? Was that through an
15 animal model?

16 A. That was determined both in examining humans,
17 autopsy data, and then in verifying the mechanism
18 through laboratory animal studies.

19 Q. Who verified it through animal studies?

20 A. I don't -- don't remember the names.

21 Q. Do you know where it was -- where the animal
22 laboratory study was?

23 A. These are -- were an extensive set of laboratory
24 animal studies, but I don't remember where they were
25 conducted. It wasn't just one laboratory; there were

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- 1 several laboratories that were involved.
- 2 Q. Were the results published in a peer review
- 3 journal?
- 4 A. In peer review journals, right.
- 5 Q. Do you know which ones?
- 6 A. No.
- 7 Q. What is "The Molecular Basis of Cancer" that you
- 8 refer to in the paragraph on page three there of
- 9 Exhibit 1401?
- 10 A. Oh, the reference? That's a textbook --
- 11 Well it's a textbook on cancer.
- 12 Q. In your report on page three, the last
- 13 paragraph, it says, "Laboratory proof is needed --
- 14 Laboratory proof is needed before a substance can be
- 15 identified as a cause of cancer or other diseases,
- 16 such as emphysema." Do you see that?
- 17 A. Yes.
- 18 Q. Can you cite to any recognized peer reviewed
- 19 scientific authority that takes that position?
- 20 A. For emphysema?
- 21 Q. No.
- 22 A. Or for cancer and other diseases?
- 23 Q. For cancer or other diseases, including
- 24 emphysema. Give me the broadest --
- 25 A. Well the broadest answer is that Koch's

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1 Postulates is the basis for that.

2 Q. Any other?

3 A. Well Koch's Postulate is --

4 I've mentioned Susser's publication in 1996
5 where he talks about determining cause, and he refers
6 to Koch's Postulates as the gold standard.

7 Q. Any other peer reviewed scientific authority
8 that takes that position, doctor?

9 A. Well I've attached several references, and I
10 think you could find that in any of those references.

11 Q. Well why don't you just tell me a few of them.

12 A. The one that we could start with is the
13 reference on the same page, the Surgeon General in
14 1964 made that clear in the report, that laboratory
15 animal studies were needed to understand the
16 mechanisms.

17 Would you like another example, is the -- well,
18 the second article is one that I published with Dr.
19 Vigerstad on the use of laboratory animal models --

20 Q. Is that a peer review --

21 A. -- for emphysema.

22 Q. Is that a peer review presentation that was
23 published?

24 A. Yes.

25 Q. Read that off for me.

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1 A. "Regulatory Toxicology and Pharmacology."

2 Q. What year?

3 A. 1989.

4 Q. Any other publications that support that
5 sentence on page three of your report that laboratory
6 proof is needed before a substance can be identified
7 as a cause of cancer or other diseases, such as
8 emphysema?

9 A. Well, Higginson in his -- the next reference.

10 Q. Just read that for the court reporter, would you
11 please, slowly?

12 A. That's J. Higginson, Muir, that's C. S. Muir,
13 and N. Munoz, it's called -- the title is "Human
14 Cancer: Epidemiology and Environmental Causes
15 (1992)."

16 You asked me about the reference to "The
17 Molecular Basis of Cancer." That's listed in here,
18 by Mendelsohn.

19 Q. Spell Mendelsohn for the court reporter.

20 A. M-e-n-d-e-l-s-o-h-n. And that's 1995.

21 Q. All right, doctor, let me ask you another
22 question. On page 114 of your deposition, which is
23 Exhibit 1400 -- do you want to take a look at the
24 page? On line 22 and 23, you see where you, in an
25 answer to one of Mr. Wilner's questions, you say you

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1 would have to assume that a company that has a
2 product will be conducting experiments on that
3 product?

4 A. Yes, I see the -- the answer that I gave.

5 Q. And would that be your testimony today?

6 A. Let me read the context of that.

7 My testimony would be the same today.

8 Q. So you'd assume that a company that has a
9 product will conduct experiments on that product;
10 isn't that right, sir?

11 A. Yes.

12 Q. Now would you also assume that a company that
13 manufactures a product will conduct experiments to
14 see whether that product is safe or unsafe as used?

15 A. Well "safe" --

16 I don't know how to answer that question.

17 Q. Why not?

18 A. Depends on how you define "safe."

19 Q. Well let's define "safe" and think about it as
20 safe for human -- to human health, doctor.

21 A. Well "safe" means different things to different
22 people, to different agencies based on what mandates
23 are. "Safe" is -- is a relative term just like
24 "cause" is; means several different things to
25 different people. And like I say, the companies have

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1 various reasons for conducting laboratory studies.

2 If you want to ask the question, I'll try to
3 answer it if you can define for me what you mean by
4 "safe."

5 Q. Doctor, if the cigarette companies over the last
6 four decades have conducted experiments which showed
7 that cigarettes had adverse health effects to the
8 people that smoked, do you think that they would have
9 an obligation to withdraw cigarettes from the market?

10 A. I can't answer that. That's a -- that's a
11 difficult issue to answer.

12 Q. Tell me why.

13 A. Just as --

14 One of the areas that I review and work in is
15 pharmaceuticals. Pharmaceuticals may have injurious
16 effects and hazardous effects based on laboratory
17 animal studies but may still continue to be used for
18 some applications as a product, and it's used because
19 it falls under a specific regulation. That's why it
20 makes it difficult to answer your question about
21 cigarettes.

22 Q. Well let me follow up on that.

23 Doctor, are you comparing pharmaceuticals with
24 cigarettes?

25 A. No, I'm simply saying that that's an example of

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1 a set of regulations. Pharmaceuticals are
2 regulated. There are, I'm sure, regulations of some
3 type for cigarettes.

4 Q. Do you know of any good health purposes that are
5 served by cigarette smoking?

6 A. Well there are some studies that actually do
7 show some beneficial effects, but for the most part
8 the studies show that, as we've talked about, that
9 cigarette smoking increases the risk of various
10 diseases.

11 Q. Can you name some of the studies that show that
12 smoking cigarettes has health benefits?

13 A. Well there are studies, for example, that --
14 that show decreases in some cancers in women, breast
15 cancer in women.

16 Q. That smoke?

17 A. That smoke. And --

18 Q. Where are those studies to be found?

19 A. I don't know. I've -- and there are --

20 There are studies that show a decrease in some
21 cancers, and some show an increase in cancers.

22 That's what you see in the studies. That doesn't
23 mean that -- that they're necessarily beneficial or
24 otherwise.

25 Q. Do you know of any reputable scientist in this

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1 country in the last 30 years who is able to point to
2 the health benefits of smoking?

3 A. Oh, I think several organizations, including the
4 Surgeon General, have indicated that there were some
5 studies that showed decreases in some cancer rates
6 for those that smoke. The question from a public
7 health standpoint is do those outweigh the risks of
8 smoking.

9 Q. What do you think?

10 A. You know, based on the risk factors that I've
11 seen from smoking, I don't think that it would
12 probably be public health -- an acceptable public
13 health approach to recommend people begin smoking.

14 Q. Would you ever advise anybody to begin smoking
15 in order to receive some health benefit from smoking?

16 A. Well I'm not a physician, but I don't believe
17 so.

18 Q. Let's go back to my question. If over the last
19 four decades, at any time during the last four
20 decades the cigarette companies have conducted
21 studies that demonstrated to them that cigarette
22 smoking was unhealthy and caused adverse health risks
23 to the American public, do you think that they had a
24 moral obligation to withdraw cigarettes from the
25 market?

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1 A. Like I say, I don't -- I don't know how to
2 answer that question in that that involves much more
3 than just science. That's a policy issue and
4 involves a lot of other aspects.

5 Q. Well I understand all that, doctor. But you're
6 an American citizen, the father of five, husband,
7 possible grandfather one of these days.

8 You brought your children up in a certainly
9 moral framework; didn't you?

10 A. I tried.

11 Q. Well we all did the best we could; right?

12 A. Yes.

13 Q. Sometimes it doesn't work out the way we want it
14 to, but we're still trying.

15 But let's take that question in the moral
16 framework in which you have brought up your children
17 and which you presumably lead your life. If at any
18 time in the last four decades cigarette companies
19 conducted tests and concluded that cigarettes caused
20 adverse health consequences to people who smoked, do
21 you think they had an obligation to withdraw
22 cigarettes from the market?

23 A. Like I say, I don't know the answer to that.

24 I'm not involved in those types of activities.

25 Q. Well I know that --

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1 A. If they asked me to peer review a study for
2 them, I could tell them what the study meant, but as
3 to the decision as to whether to market some product
4 or not, that's outside of my expertise and even
5 knowledge. I don't know how to respond to your
6 question.

7 Q. Well I'm going to move to respond -- to strike
8 the answer because it wasn't responsive.

9 Let's see if we can stick with my question. I
10 understand that you're a scientist and all that,
11 doctor, but I want to talk to you just as a United
12 States citizen, father of five, perhaps a
13 grandfather-to-be, just a citizen of the community in
14 the moral context in which you brought up your
15 children.

16 If the cigarette companies over the last four
17 decades conducted tests that show that the cigarettes
18 that they manufacture and sell have adverse health
19 consequences to the consumers, do you think they had
20 an obligation to withdraw that from the public --
21 withdraw that from the market?

22 A. I say I have no way of answering your question.
23 I don't know.

24 Q. Doctor, during the last four decades if the
25 cigarette companies had studies, experiments that

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1 showed that cigarettes had adverse health effects to
2 consumers who smoke them, do you think they had an
3 obligation to tell the public that cigarettes were
4 unsafe?

5 A. I believe that as companies conduct studies to
6 understand the potential health effects of a product,
7 that during the time the product is put on the market
8 and made available, that there at some point needs to
9 be some indication of potential adverse health
10 effects. But that again varies depending on the law,
11 the product, how it's regulated in commerce and so
12 forth, and those are not areas that I typically get
13 into.

14 Q. Well let's talk about cigarettes, doctor. Let's
15 talk about you as a father of five, perhaps a
16 grandfather-to-be one of these days, an American
17 citizen. Do you believe that if over the last four
18 decades cigarette companies had tests that concluded
19 that the cigarettes they sold had adverse health
20 effects on the people who smoked them, they had an
21 obligation to inform the public of that?

22 MR. RYERSON: Objection, vague. It's not
23 clear to me whether this is a hypothetical.

24 A. Yeah, I --

25 Like I say, I don't know how to answer the

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1 question.

2 Q. Why not?

3 A. I've repeated it three times, but I don't know
4 how to answer the question based on the way you
5 phrased it.

6 Q. What is there about my phrasing of the question
7 that makes it difficult for you, doctor?

8 A. Well for one thing, if you --

9 You brought my children into this. If you asked
10 my children, they would tell you what they had seen,
11 and these are warning labels and so forth. And then
12 you asked me about the obligation of companies to
13 provide information. Companies provide information
14 all the time in a form of various types of labels.
15 But as I indicated, this is an area that I don't work
16 in. And from my perspective as a father, I've seen
17 these labels, but that's -- I don't know whether they
18 complied or didn't comply. You'd have to ask an
19 attorney that.

20 Q. Well no, I'm not asking you for any sort of
21 legal opinion, doctor.

22 A. Well I gave you my opinion, then, the best I
23 can.

24 Q. Well let me -- we're going to try it again, see
25 if we --

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1 I'm not asking you for a legal opinion, not
2 asking you for a scientific opinion. I'm just asking
3 you as an American citizen, an educated man, has a
4 Ph.D., who's obviously older than 25, got five kids.
5 And very simple: If during the last four decades the
6 cigarette companies have conducted experiments and
7 studies that demonstrated to them that the cigarettes
8 that they sold had adverse health effects with
9 respect to those people who smoked, do you think they
10 had an obligation to tell the American public that?
11 A. As they were regulated, they had an obligation
12 for that regulation, but --

13 I don't know what their obligations were.
14 Q. I'm talking in the context and the framework of
15 the moral compass that you tried to give your
16 children. Forget about the regulations, we're not
17 talking about the regulations, so let's -- let's not
18 worry about the regulations. It's independent of
19 regulations.

20 Let me ask you the question again. Doctor, as
21 an American citizen, father of five, somebody who's
22 got a Ph.D., been involved in this area of lung
23 cancer/carcinogens for a long time, do you think that
24 if, over the last four decades, if the cigarette
25 companies conducted studies or experiments that

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1 determined smoking cigarettes had an adverse
2 health -- or an adverse effect on public health on
3 the consumers that smoked it, they had an obligation
4 to tell the American public that?

5 A. I don't know how to answer your question.

6 Q. Why not?

7 A. I just explained to you I don't know what their
8 obligations were.

9 Q. The moral obligations, doctor.

10 A. But I explained -- I explained to you even moral
11 obligations for the family. And if you'd asked one
12 of my children, they could tell you that they had
13 seen labels and so forth. And past that, I don't
14 know how to answer your question.

15 Q. Well I'm not --

16 A. You're -- you're asking me to -- to get into an
17 area that I don't know anything about.

18 Q. Well you make moral --

19 You've made moral judgments and brought your
20 children up in a moral framework; haven't you?

21 A. I think that's the way I responded.

22 Q. And you have --

23 You wanted your children to tell the truth;
24 didn't you?

25 A. Yes.

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1 Q. You wouldn't want your children to do anything
2 that would hurt somebody else; would you?

3 A. No, I wouldn't.

4 Q. Okay. You would try to live your own life that
5 way; wouldn't you?

6 A. Yes.

7 Q. All right. Now let's talk about cigarette
8 companies. If executives in cigarette companies over
9 the past four decades had studies and experiments
10 that demonstrate smoking cigarettes had an adverse
11 effect on the health of the consumers that smoked
12 them, do you think they had an obligation to tell
13 that to the American public?

14 MR. RYERSON: Mr. Kayser, this is really
15 the fifth time you've asked the same question. I --

16 MR. KAYSER: Well the witness is evading
17 the question, counsel, so let's see if we can get --

18 A. Well the witness, I think, has tried to respond
19 the best I can to your question, as vague as it is.
20 And it's an area that I don't work in, I don't know
21 anything about. And I tried to respond to you in two
22 different ways, and I think all I can say is I don't
23 know past those responses how to answer your
24 question.

25 Q. If you still had --

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1 A. A lot of companies produce products and have
2 different obligations for those products based on the
3 law of the land and how those products are
4 regulated. Those vary from product to product, and I
5 don't know what their obligations are.

6 Q. Talking about moral obligation, not legal
7 obligations. You understand that, doctor? We're
8 talking about moral obligations here.

9 A. I understand that you're talking about moral
10 obligations.

11 Q. You're still unable to answer the question?

12 A. I don't understand your question.

13 Q. What don't you understand about it?

14 A. Like I say, I don't know -- it's --

15 It's such a vague question that I don't know how
16 to respond to your question.

17 Q. Well doctor --

18 A. If I had been a legal scholar and had gone back
19 and looked through 40 years of documentation and so
20 forth and tried to make an assessment, then maybe I
21 could answer your question, but that's not my field,
22 that's something that I don't do, and I don't even
23 remember reading anything about that, so I don't know
24 how to respond to your questions.

25 Q. Now just for the sake of this question, doctor,

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1 please don't tell me again that you're not a legal
2 scholar because I understand that. Okay? So we're
3 not going to talk about statutes, we're not going to
4 talk about regulations, not going to talk about
5 scientific stuff, we're not going to talk about how
6 this isn't your field. I want you to exclude all
7 that. Put that off to one side because I'm not
8 asking you the question in the context of the law,
9 statutes, regulations or scientific knowledge; just
10 talking about you as an educated man, father of
11 five.

12 Do you think that if a company knows -- the
13 cigarette companies knew that they were marketing a
14 product that was unsafe to the people who consumed
15 it, they had an obligation to tell the public they
16 knew that cigarettes were unsafe?

17 A. I don't know how to answer your question.

18 Q. Why not?

19 A. Because I don't --

20 You haven't yet told me what you mean by
21 "obligation."

22 Q. You don't understand the word "obligation?"

23 A. Not -- not within the context of a set of
24 company products, no, I don't. That's not an area
25 that I work in.

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1 Q. Well doctor, let -- let's shift this.

2 Your children obviously were babies once, and
3 you put them in cribs, I'll bet, or play pens; didn't
4 you?

5 A. Yes.

6 Q. Okay. If a company marketed a crib that it knew
7 had a chance of strangling children who pushed their
8 head through the slats, would you expect them to
9 recall that product before it killed your child?

10 A. I don't think a company would market such a
11 product.

12 Q. Well let's assume one did. They didn't know it
13 when they put it on the market, but they discovered
14 it later. Think they had an obligation to tell the
15 public that the product they marketed might strangle
16 children?

17 A. Well for one thing, they wouldn't be telling the
18 public, they'd be telling the Consumer Products
19 Safety Commission that they found a fault with a
20 product that they had on the market, and the Consumer
21 Product Safety Commission then, based on the
22 regulations, would respond in some way. And I don't
23 know what that is.

24 Q. And so if your child was strangled or your
25 friend's child was strangled before the Consumer

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1 Products Safety Council got around to warning the
2 public, it's one of those things, just the hazards of
3 life?

4 A. I think those warnings come out fairly quickly.

5 Q. Well what if the company doesn't tell the
6 Consumer Products Safety Council? What if they want
7 to continue to reap the profits off of those cribs?
8 Would you consider that to be an immoral act, doctor?

9 A. Like I say, it's -- it's a whole area that I
10 don't know how to even respond to your question.

11 Q. Well you have --

12 You have five children, they were babies once,
13 and you put them in a crib; didn't you?

14 A. That's right.

15 Q. And if the maker of the crib --

16 A. Well like I say, the best I understand the
17 obligations, the maker of the crib would inform a
18 relevant -- relevant regulatory authority as to a
19 flaw that they had found in the crib, and then the
20 authority would decide how to inform the public
21 properly and -- and what to do about a recall.

22 Q. And if the manufacturer of that crib failed to
23 report that to the Consumer Products Safety Council,
24 would you consider that an immoral act?

25 A. I have no idea. Again, that's a legal question.

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1 Q. No, no, no, it's not a legal question, doctor.

2 It's a question --

3 A. I see it as a legal question.

4 Q. Well let's remove the legality here from it for
5 a moment. Let's just talk about the fact that the
6 maker of the crib didn't announce to the public that
7 their cribs might kill babies because they wanted to
8 continue to make profits off of those cribs. Would
9 you consider that to be an immoral act, doctor, in
10 the context of the moral framework that you've lived
11 your life and taught your children?

12 A. You're talking about they lied to the public.

13 Q. Didn't lie to the public. They didn't say
14 anything to the public; they simply remained silent,
15 knowing that the cribs they manufactured had a
16 possibility of strangling and killing children,
17 little babies.

18 A. I don't know what you mean by being silent
19 then. If they knew it, they would have either had to
20 admit to it or not to admit to it, and it would be
21 under the law or not under the law.

22 Q. No one admitted to it and nobody asked them.
23 They didn't affirmatively put the information on the
24 market that their cribs might kill children. Is that
25 an immoral act, doctor?

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1 A. Well then I don't understand your question.

2 Q. Why?

3 A. Because that's not how products are handled
4 within a company.

5 Back in the '70s I worked in a company, and
6 that's not how they would have handled the product.

7 Q. Maybe not your company, but let's take a company
8 that handles it differently, doctor. They decide not
9 to tell the public. They simply remain silent. They
10 know that their cribs may cause death to children and
11 they simply choose to remain silent. Think that's an
12 immoral act on the part of the executives in that
13 company?

14 A. Well like I say, there is no such thing. Your
15 question doesn't make any sense.

16 Q. Why not?

17 A. Because the company internally is not silent;
18 they either make a decision to do so or a decision
19 not to do so. There's no such thing as silence.

20 Q. Well they do make a decision, they -- the
21 decision is to remain silent. That is the decision.

22 A. Well then your question doesn't make any sense.

23 Q. Why?

24 A. I think I just explained that. I'll explain it
25 one more time. With a product that, say, has

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1 undergone testing, in this case a crib, and you found
2 some defects within the crib, the company would have
3 discussions internally as to what to do with those
4 cribs, and you're saying that the company decided to
5 withhold the information. That's in essence lying to
6 the public.

7 Q. Okay. Let's take that set of circumstances.

8 The same thing happened with the cigarette companies
9 in the last four decades. Executives in the
10 cigarette companies conducted experiments and they
11 had concluded that people who smoke cigarettes were
12 likely to suffer adverse health consequences, and
13 they discussed whether to make that public and they
14 decided not to. Would you consider that lying on the
15 part of those executives?

16 A. Like I say, they're not disclosing information
17 to the public, but I don't know what meaning that
18 has.

19 Q. But would you say they're lying?

20 A. They're either telling the public or not telling
21 the public.

22 (Witness pouring Coca-Cola into a styrofoam
23 cup which overflows.)

24 THE WITNESS: This must be warm.

25 Q. Well you've just told me, doctor, about the

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1 executives having internal discussions about cribs
2 and then decided to withhold the information from the
3 public, and you've just told me that they would be
4 guilty of lying. You just testified to that;
5 remember that?

6 A. Yes. That's based on the fact that they have an
7 obligation to provide a product under their mandate
8 that is safe -- quote, safe under the Consumer
9 Products Safety Commission.

10 Q. Do you think cigarette companies have an
11 obligation to manufacture and sell a safe product?

12 A. I -- I don't know how to answer that. There's a
13 lot of products on the market that have various
14 degrees of, quote, safety.

15 Q. No. Let's talk about cigarettes, doctor. I
16 don't want to talk about other products on the
17 market. Let's talk about cigarettes.

18 Do you believe the cigarette companies have an
19 obligation to manufacture and sell a safe product?

20 A. Based on what? What do you mean by "safe?"

21 Q. Well you just told me a few minutes ago, doctor,
22 that you didn't believe that you could make a safe
23 cigarette, so let's take it in that context that you
24 said that. Okay?

25 A. Okay.

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1 Q. Do you believe that cigarette companies have an
2 obligation to make and sell a safe product?

3 A. Actually what I referred to is the non -- or
4 less hazardous cigarette.

5 Q. Well that's not what you --

6 A. And in responding --

7 Go ahead and ask your question.

8 Q. That's not what you said in Mississippi and
9 that's not what you said here. You talked about a
10 safe cigarette; you didn't say less hazardous. So I
11 want to take "safe" in the way you were discussing it
12 in Mississippi and the way you're answering it here.

13 Do you think that the cigarette companies have a
14 responsibility to manufacture a safe cigarette?

15 A. I think you're incorrect. In the Mississippi
16 testimony I don't think I said "safe," I talked about
17 "less hazardous." In the section we just read from
18 Mississippi it said "less hazardous."

19 Q. Do you think the cigarette companies have a
20 responsibility to manufacture a safe cigarette?

21 A. It's my understanding, and we had talked about
22 this earlier, that the companies and the federal
23 government both had tried to produce a less hazardous
24 cigarette.

25 Q. Well let's talk about my question now, doctor,

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1 not -- you've --

2 You're not answering my question, so I'm going
3 to move to strike that answer.

4 Do you believe the cigarette companies have an
5 obligation to manufacture a safe cigarette?

6 A. If -- if the cigarette companies knew how to
7 manufacture a less hazardous cigarette, then I would
8 expect that they would try to develop such a
9 cigarette.

10 Q. In the absence of that, they can continue -- as
11 far as you're concerned, cigarette companies can go
12 ahead and manufacture unsafe cigarettes?

13 MR. RYERSON: Objection as to form.

14 Q. Is that right?

15 A. Well the problem is is how you're using "safe."
16 Like I say, it's less hazardous. And the problem is
17 we don't have a laboratory animal model, we don't
18 have a way of judging relative toxicity or, as you
19 ask it, relative safety, and so it would be difficult
20 for the cigarette companies to develop a less
21 hazardous cigarette without having a yardstick to
22 measure that by.

23 Q. So far as you're concerned, doctor, is it okay
24 as far as you're concerned for cigarette companies to
25 go ahead and continue to manufacture hazardous

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1 cigarettes?

2 A. Well like I say, I don't know. That's an area
3 of regulation that I have not been involved in.

4 Q. Let's talk about moral issues. Forget
5 regulation. I don't want to talk about regulation.
6 I don't want to talk about legal issues here,
7 doctor. As far as you're -- just moral issues,
8 doctor, the way you lived your life and brought your
9 children up.

10 Do you believe that the tobacco companies, as
11 far as you're concerned, they can go ahead and
12 manufacture hazardous cigarettes? Okay with you?

13 A. Well they're -- they're selling cigarettes on
14 the market according to the laws. I don't -- and
15 they're continuing to manufacture them.

16 I think from a public health standpoint, and I
17 said this earlier, that I would like to see a
18 reduction in the amount of smoking in the United
19 States because there would be an increase in public
20 health. Now that's the best I can respond to your
21 question because your question is pretty vague.

22 Q. Well all right, doctor. If over the last four
23 decades the executives in various cigarette companies
24 knew because of their own studies that cigarette
25 smoking was hazardous to the health of the people

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1 that consumed them and then lied about that and said
2 that cigarette smoking was not hazardous to health,
3 would that offend you?

4 A. You're saying if they knew that it was?

5 Q. Yes, and then affirmatively lied about it to the
6 American public. Would that offend you?

7 A. It's such a broad question, it's -- it's very
8 difficult to answer. They haven't lied to me, so I
9 don't know what you're referring to, actually.

10 Q. How do you know that they haven't lied to you?

11 A. Well I haven't talked to any presidents of
12 cigarette companies.

13 Q. Pardon me?

14 A. I haven't talked to any presidents of cigarette
15 companies.

16 Q. But let's go back to my question. If over the
17 last four decades, sometime during the last four
18 decades the executives in cigarette companies were
19 aware that the cigarettes they manufactured had an
20 adverse health effect on consumers that smoked them
21 but they told the American public cigarette smoking
22 did not have adverse consequences, would you be
23 offended by that as an American citizen, father of
24 five?

25 A. I would not want to see a president of any

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1 company that produces a product lie to the public.

2 Q. Well let's -- let's talk about the cigarette
3 companies, doctor. We're not -- don't talk about
4 anybody else, let's talk about the cigarette
5 companies.

6 Would you be offended if the executives of
7 cigarette companies lied about the adverse health
8 effects of cigarettes?

9 A. Oh, like I say, that's --

10 I don't know anything about if they lied to the
11 public. You know, it's such a broad question, I
12 don't even know how to answer it.

13 MR. RYERSON: Excuse me, it may help to --
14 to -- Dr. Thomas, to answer his question
15 responsively. If I --

16 As I understand, it's being posed as a
17 hypothetical --

18 MR. KAYSER: Of course.

19 MR. RYERSON: -- and it ought to be
20 answered in that context.

21 A. Okay. If you're posing this as a hypothetical,
22 that the heads of cigarette companies lied to the
23 public, --

24 Q. Well let me get back to the question.

25 A. -- then I would be opposed to that.

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1 Q. Let -- well that's good. I'm just trying to get
2 what your threshold of moral outrage is, doctor.

3 If sometime during the last four decades
4 executives of cigarette companies were aware that
5 cigarette smoking is hazardous to the health of the
6 consumers who smoke them and lied to the American
7 people about that, would that offend you?

8 A. Well you say if. If --

9 If you're assuming that that's correct, I would
10 be offended by that.

11 Q. Now if those same officials were aware during
12 the last four decades that cigarette smoking had
13 adverse health effects on the consumers who smoke
14 cigarettes and they hid the information and didn't
15 tell the American public about it, would you be
16 similarly offended?

17 A. Well again this is hypothetical?

18 Q. Yeah.

19 A. I guess from a hypothetical standpoint I would
20 not want to see company directors lie about
21 information to the public for products on the market.

22 Q. Would you be offended if they had the
23 information, the adverse health consequences of
24 smoking, and didn't affirmatively lie about it but
25 simply hid it from the American public and didn't

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1 tell the American public that? Would that offend
2 you?

3 A. Well again is this hypothetical?

4 Q. It doesn't make any difference. I'm just asking
5 you whether -- what your view is.

6 A. Well see, over the --

7 It's very difficult to answer such a vague
8 question because over the last 40 years there have
9 been a lot of publications in the peer reviewed
10 literature that talk about the effects of smoking,
11 and I assume that these company presidents are as
12 aware of that as anybody, so I don't --

13 Unless you pose it as a hypothetical, it's very
14 difficult to answer it, because from what I'm aware,
15 there has been a lot of information both in the
16 scientific literature and otherwise about the risks
17 of cigarette smoking.

18 Q. All right. But let's just talk about the
19 cigarette company executives now. Let's not talk
20 about all the scientific -- I understand the
21 scientific picture. Let's talk about the people who
22 run the cigarette companies and who make the
23 decisions in cigarette companies.

24 If over the last four decades they had
25 information which led them to believe that cigarette

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1 smoking had adverse health consequences to consumers
2 who smoke cigarettes and they didn't tell the
3 American public about that, would that offend you?

4 A. Is this hypothetical, that they had
5 information --

6 Q. Sure.

7 A. -- that wasn't conveyed to the public in some
8 format?

9 Q. That they didn't convey to the public. The
10 people in the cigarette companies didn't convey, not
11 that it didn't come from anybody else, but the
12 cigarette company, the personal cigarette companies
13 didn't convey it.

14 A. Well it's an awfully vague question.

15 Q. Not a vague question at all, doctor. It's a
16 very straightforward question here, and everybody
17 knows it.

18 A. Maybe I just don't understand, the way you're
19 asking it.

20 Q. Well I'm trying to get to whatever your
21 threshold of moral outrage is. Maybe you don't have
22 one, I don't know.

23 But let's talk about if over the last four
24 decades personnel in responsible positions in
25 cigarette companies had information that cigarette

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1 smoking caused adverse health consequences and didn't
2 inform the American public about it, would that
3 offend you?

4 A. It would have to be in a legal context.

5 Q. I'm --

6 Forget the legal context. I don't care about
7 the legal context.

8 A. Then I don't understand the question.

9 Q. You don't understand the question?

10 A. That's right.

11 Q. You don't have a moral context in which to
12 answer that question, doctor?

13 A. I'm a professional. I work with products and
14 materials all the time that there's judgments made on
15 those materials. We have guidelines for making those
16 judgments and we don't deal with such vague
17 approaches. They're very specific.

18 Q. That's your answer?

19 A. That's my answer.

20 Q. Would you agree with me, doctor, that increased
21 exposure to cigarette smoke in smokers leads to an
22 increased risk of cancer?

23 A. It increases the risk of developing cancer.

24 Q. Would you agree there's a strong association
25 between cigarette smoking and lung cancer?

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- 1 A. There's a strong statistical association.
- 2 Q. Are you familiar with the term "environmental
- 3 tobacco smoke" or ETS?
- 4 A. Yes, I am.
- 5 Q. "Secondhand smoke?"
- 6 A. Yes.
- 7 Q. Do you believe that secondhand smoke causes
- 8 disease in humans?
- 9 A. Not causes disease in humans.
- 10 Q. Do you believe that secondhand smoke is
- 11 associated with disease in humans?
- 12 A. There are epidemiologic studies that show
- 13 associations with secondhand smoke.
- 14 Q. Do you believe that secondhand smoke is
- 15 associated with disease in humans?
- 16 A. Yes.
- 17 Q. Do you believe that secondhand smoke is
- 18 associated with cancer?
- 19 A. I don't think the studies clearly show that.
- 20 Q. Doctor, in the context of --
- 21 A. No.
- 22 Q. Pardon me?
- 23 A. No.
- 24 Q. In the context of the last 20 years that you've
- 25 been working in this area, do you believe that

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1 secondhand smoke is associated with lung cancer?

2 A. Like I say, there's -- there appears to be some
3 statistical association with secondhand smoke but the
4 association is -- is not very large, and it is not
5 consistent from study to study.

6 Q. I would like to know what you believe, doctor.
7 Do you believe that secondhand smoke is associated
8 with lung cancer?

9 A. I don't believe it's been proven to be, and
10 that's what I believe.

11 Q. Do you believe that secondhand smoke is
12 associated with respiratory illness, sir?

13 A. Again, there are associations between secondhand
14 smoke and respiratory illness, upper respiratory
15 infections in children.

16 Q. And do you believe secondhand smoke is
17 associated with respiratory illness, sir?

18 A. There is enough studies that the answer is yes.

19 Q. Do you believe, sir, that secondhand smoke is
20 associated with asthma?

21 A. There's not enough positive studies, so I don't
22 believe so.

23 Q. Are you familiar with a report in the last two
24 or three months from the California Environmental
25 Protection Agency with respect to secondhand smoke

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1 and its health consequences?

2 A. I'm familiar with the report, yes.

3 Q. Have you read the report, sir?

4 A. Not in detail.

5 Q. Have you --

6 But you have read it; is that right, sir?

7 A. I've read through the report, glanced through

8 it; I haven't read it in detail.

9 Q. Doctor, I'd like to show you what is about to be
10 marked as Exhibit 1414.

11 (Plaintiffs' Exhibit 1414 was marked
12 for identification.)

13 BY MR. KAYSER:

14 Q. Mr. Ryerson, first of all, I've shown you what
15 has been marked as Exhibit 1414, which is a -- an
16 article that you wrote --

17 MR. RYERSON: That Dr. Thomas wrote.

18 MR. KAYSER: Dr. Thomas wrote. What did I
19 say?

20 MR. RYERSON: I think you attributed it to
21 me, which implies much more knowledge than I have.

22 MR. KAYSER: Mr. Ryerson, congratulations.

23 Q. Okay. Exhibit 1414 is an article that you
24 wrote; isn't that right, sir?

25 A. Yes.

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1 MR. KAYSER: And in the interest of full
2 disclosure, Mr. Ryerson, I have not predesignated
3 that, I just received it a day or so ago, but I
4 assume you'll have no objection to my --

5 MR. RYERSON: I believe we gave it to you.

6 MR. KAYSER: You did give it to me, yes.

7 BY MR. KAYSER:

8 Q. You recognize Exhibit 1414; don't you, sir?

9 A. Yes, I do.

10 Q. Okay. In the lower right-hand corner you make
11 the statement, quote, "A fundamental maxim of
12 pediatric medicine is that children are not, quote,
13 'little adults.' Profound differences exist between
14 children and adults," so forth. See that?

15 A. Yes.

16 Q. Doctor, knowing what you know now about
17 secondhand smoke, if you had a grandchild and that
18 grandchild was in a day-care facility where the
19 people smoked, would you tell your -- whichever child
20 had that grandchild to get the grandchild out of the
21 day-care center where the people smoked?

22 A. I would want to reduce the exposure of that
23 grandchild to smoke.

24 Q. Would you tell your --

25 A. I would be very surprised that a day-care center

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1 would allow smoking, but I --

2 To answer your question, I would either try to
3 arrange for the child to be moved out of the day-care
4 center or the center to stop smoking around children.

5 Q. Secondhand smoke in any place that your
6 grandchild was could possibly be injurious to your
7 grandchild?

8 A. Well as I indicated, we do know that there is an
9 increase -- statistical increase in upper respiratory
10 infections in children exposed to secondhand smoke,
11 and so from that standpoint, to reduce the potential
12 of a grandchild to get upper -- more upper
13 respiratory infections, I would recommend against
14 exposure to secondhand smoke.

15 Q. You would strongly recommend that your
16 grandchild be taken away from secondhand smoke;
17 wouldn't you, doctor?

18 A. I think it would be a good idea.

19 Q. Well you'd think it would be more than a good
20 idea and insist on it; wouldn't you, doctor?

21 A. As a hypothetical, I would insist on it.

22 Q. Well wouldn't you --

23 A. But I don't know.

24 Q. Wouldn't you insist on it as a grandfather?

25 A. But -- I don't have any grandchildren, but in

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1 these centers the people do not smoke anyway, so it's
2 a hypothetical.

3 Q. Well if you were in a restaurant, doctor, and
4 took your grandchild, your eight- or ten-month-old
5 grandchild to a restaurant and the only place you
6 could go was the smoking section that was filled with
7 smoke, would you have dinner in that restaurant with
8 your grandchild?

9 A. If that's all that was available, I probably
10 would.

11 Q. You would?

12 A. Yes.

13 Q. So you wouldn't mind exposing your grandchild to
14 secondhand smoke in that restaurant; right, doctor?

15 A. In the time period of a dinner, I wouldn't be
16 concerned.

17 Q. Doctor, you can put that down.

18 Are you aware that in 1992 the United States
19 Environmental Protection Agency classified secondhand
20 smoke as a known human carcinogen?

21 A. Yes.

22 Q. Do you agree with that?

23 A. No, I don't agree with that.

24 Q. Why not?

25 A. I don't think the studies are sufficiently

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1 strong to show that secondhand smoke is a human
2 carcinogen. As I indicated, the relative risks in
3 these studies are not very large and -- and some of
4 them showed no increase in risk and some a slight
5 increase, but I don't believe that the studies
6 clearly show that.

7 Q. Secondhand smoke contains toxic chemicals;
8 doesn't it, sir?

9 A. Yes.

10 Q. Are those toxic chemicals hazardous to human
11 health?

12 A. They may be at higher concentrations.

13 Q. Do you read the Journal of the American -- the
14 Journal of the American Medical Association, doctor?

15 A. I used to. I don't very much any more.

16 Q. Did you read the Journal of the American Medical
17 Association in 1995?

18 A. Yes.

19 Q. Do you recall the articles in the Journal of the
20 American Medical Association in 1995 about the
21 tobacco industry?

22 A. I remember seeing some articles in the Journal
23 of the American Medical Association in 1995 about the
24 tobacco industry.

25 Q. Do you recall those articles in the Journal of

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1 the American Medical Association in 1995 that talked
2 about the documents that came from the various
3 cigarette companies that discussed the adverse health
4 effects of cigarette smoking?

5 A. I don't remember the articles very well. I
6 remember there were articles. I don't remember that
7 much detail.

8 Q. Well weren't you interested, doctor, about what
9 the cigarette companies knew over the last 20, 25
10 years? These are people that you've worked for and
11 received money from. And the Journal of the American
12 Medical Association articles were critical of the
13 cigarette companies; weren't they, doctor?

14 A. As I remember, they were.

15 Q. And weren't you interested in why they were
16 critical of the cigarette companies? Again, these
17 are companies that have been paying you what you
18 can't -- a sum of money you can't recall. Didn't you
19 read those articles closely to find out what the
20 Journal of the American Medical Association had to
21 say about those cigarette companies?

22 A. As I remember, in reading the journals I -- I
23 glanced through the articles; I don't remember in
24 what detail I read them.

25 Q. Well do you remember that those journal articles

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1 talked about the documents that showed that some of
2 the cigarette companies knew of the adverse health
3 effects of cigarette smoking over the years and
4 failed to advise the American public? Do you
5 remember that?

6 A. No.

7 Q. What do you remember from what you read in the
8 Journal of the American Medical Association in 1995
9 about the conduct of the cigarette companies that
10 have been paying you over the years, doctor?

11 A. Like I say, I remember there were some articles,
12 I guess it was 1995, but I don't remember the details
13 of them.

14 Q. You don't remember any of the details?

15 A. Very, very few.

16 Q. After reading the articles in the Journal of the
17 American Medical Association that were critical of
18 the cigarette companies, did you call anybody at the
19 cigarette companies and ask them about the
20 allegations made in those articles?

21 A. No.

22 Q. Did you call any of the attorneys after you read
23 the articles in the Journal of the American Medical
24 Association critical of the cigarette companies, did
25 you call any of the attorneys for the cigarette

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1 companies and ask them about the truth or falsity of
2 those articles?

3 A. No.

4 Q. Did you have any curiosity about the truth or
5 falsity of the articles in the Journal of the
6 American Medical Association in 1995 about the
7 allegations they made about the cigarette companies?

8 A. I don't remember any.

9 Q. Have you been aware of allegations over the
10 years that the tobacco companies had documents
11 showing that they knew of the adverse health effects
12 of cigarette smoking and kept that information from
13 the American public?

14 A. Are you asking me if I'm aware of --

15 Q. Yes. Have you been aware over the last few
16 years of allegations that the tobacco companies knew
17 about the adverse health effects of cigarette smoking
18 and kept that information from the American public?

19 A. I have seen that in the newspapers and on the
20 news, I think probably like everybody else.

21 Q. Did you ever ask any of the lawyers for the
22 cigarette companies about those allegations?

23 A. No.

24 Q. Did you ever ask anybody from the -- any
25 personnel of the cigarette companies about those

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1 allegations?

2 A. No.

3 Q. Prior to writing your report in this matter,
4 Exhibit 1401, did you ask -- talk to any of the
5 executives of the cigarette companies about the
6 allegations that they had been hiding information
7 from the American public?

8 A. No.

9 Q. Prior to writing your report, which is Exhibit
10 1401 in this action, did you ask any of the lawyers
11 for the cigarette companies about the allegations
12 that the cigarette companies had information about
13 the adverse health effects of cigarette smoking that
14 they failed to reveal to the American public?

15 A. No.

16 Q. Have you had any contact over the last ten years
17 with executives of the cigarette companies, doctor,
18 directly, or has it all been through lawyers?

19 A. I -- I haven't had any contact, no.

20 Q. I guess I should ask you for 20 years. It just
21 occurred to me you've actually -- you've been doing
22 this for 20 years.

23 Have you had any contact over the last 20 years
24 with executives from the tobacco companies?

25 A. What do you mean by "executives?" Could you

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1 define that?

2 Q. Well let's just go with anybody in the tobacco
3 companies, doctor. In the last 20 years, have you
4 had direct contact with anyone from the tobacco
5 companies?

6 A. Well back in --

7 I mean I've been at meetings, scientific
8 meetings where there have been representatives from
9 tobacco companies, normally scientists, in those
10 meetings. The studies that were mentioned this
11 morning of Borriston Research Laboratories were
12 contracted, to the best of my recollection -- it's
13 been a long time ago -- by the heads of one or two of
14 the divisions, and so I had contact with them when
15 the contracts were signed. Other than that, I have
16 not had contact with them.

17 Q. Doctor, as you sit here today, do you care
18 whether the tobacco companies have suppressed
19 information over the last 40 years about the adverse
20 effects of cigarette smoking from the American
21 public?

22 A. I don't know how to answer that in that I
23 don't --

24 That supposes that they have. All I can say,
25 it's such a vague question, I don't know how to

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1 answer it.

2 (Recess taken.)

3 (Plaintiffs' Exhibit 1415 was marked
4 for identification.)

5 BY MR. KAYSER:

6 Q. Doctor, you have in front of you Plaintiffs'
7 Exhibit 1415, and I don't know if you want to look at
8 your report -- I will read it to you, we looked at it
9 earlier today -- but on page five of Exhibit 1401,
10 which is your report, you say at the bottom
11 paragraph, quote, "I have read Dr. Jonathan Samet's
12 Expert Report in this case, dated June 2, 1997. In
13 the past, Dr. Samet and I have worked on projects and
14 I highly respect his professional competence in
15 epidemiology. I agree with many of the statements in
16 his Report." See that? Bottom of page five and
17 around --

18 A. Bottom of page five.

19 Q. Bottom of page five, first --

20 A. Yes.

21 Q. -- two sentences -- first three sentences. See
22 that?

23 A. Yes, uh-huh.

24 Q. Did I read that accurately?

25 A. Yes, you did.

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1 Q. And is that still your view, doctor?

2 A. Yes.

3 Q. Now let's move on to Plaintiffs' Exhibit 1415,
4 doctor, which is in fact Dr. Samet's report; isn't
5 it?

6 By the way, before we get to Dr. Samet's report
7 for just a moment, are you planning to update your
8 report at all? Have you talked with anybody about
9 doing that?

10 A. We haven't discussed that.

11 Q. Okay. So doctor, what we're going to do is go
12 through Dr. Samet's report, this is Exhibit 1415.
13 And you say that you agree with many of the
14 statements made in his report, and I want to find out
15 what you agree and disagree with. So this may be a
16 somewhat arduous process. Your lawyer there is
17 starting to look at me a little strangely.

18 MR. KAYSER: Can we go off the record for a
19 minute?

20 MR. RYERSON: Sure.

21 (Discussion off the record.)

22 MR. KAYSER: Let the record reflect that
23 we've had a discussion off the record, and we have
24 agreed that what we will do is perhaps have the
25 witness read Dr. Samet's report this evening, become

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1 familiar with it, and we might be able to go through
2 it more quickly, and I'll try to get through
3 everything except that.

4 MR. RYERSON: And the understanding is that
5 if there's still time today, perhaps we'll start with
6 the report.

7 MR. KAYSER: Maybe we will.

8 MR. RYERSON: But let's see where we are.

9 BY MR. KAYSER:

10 Q. Doctor, if you'll recall, during the Mississippi
11 deposition you made reference to a publication called
12 Robbins Pathologic Basis of Disease by Cotran,
13 C-o-t-r-a-n, Kumar and Robbins, R-o-b-b-i-n-s
14 actually.

15 A. Yes.

16 Q. Do you recognize that as a preeminent authority
17 in the field of pathology?

18 A. Yes.

19 Q. And that is a book that you refer to frequently?

20 A. Yes, it is.

21 Q. It's a book, obviously, that you have confidence
22 in then?

23 A. Yes.

24 (Plaintiffs' Exhibit 1416 was marked
25 for identification.)

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1 THE WITNESS: I just have a quick
2 question. I assume these will all be attached to the
3 testimony. Is that --

4 MR. KAISER: Yes.

5 THE REPORTER: They will accompany; they
6 will not be physically attached.

7 BY MR. KAYSER:

8 Q. Doctor, I'm showing you what has been marked as
9 Exhibit 1416.

10 MR. KAYSER: And again, Mr. Ryerson, in the
11 first exhibit with respect to Robbins I included more
12 pages in the beginning just so you could see the book
13 that this is from. All of the exhibits that I will
14 be using from Robbins come from the same edition, --

15 MR. RYERSON: Yes. Thank you.

16 MR. KAYSER: -- which I believe is the 1994
17 edition which Mr. -- or Dr. Thomas referred to in his
18 Mississippi deposition.

19 Q. Is this 1994 edition the latest of the Robbins
20 Pathologic Basis of Disease, sir?

21 A. Yes, I believe it is.

22 Q. Do you know the author Dr. Cotran, C-o-t-r-a-n?

23 A. No.

24 Q. Do you know an author by the name of Kumar,
25 K-u-m-a-r?

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- 1 A. I believe I've met Dr. Kumar, but I'm not -- not
2 sure.
- 3 Q. Do you know Robbins?
- 4 A. No.
- 5 Q. Turning the page, doctor, do you know the
6 managing editor, who is listed as Frederick Schoen,
7 M.D. and Ph.D.?
- 8 I think you're looking at the wrong page there,
9 doctor.
- 10 A. If it's the same Frederick Schoen, he's up at
11 Boston.
- 12 Q. Do you know Dr. Schoen?
- 13 A. Like I say, I believe we've met. I don't know
14 him well.
- 15 Q. Is he preeminent in his field, doctor?
- 16 A. Yes.
- 17 Q. Looking now, doctor, at the contributors list --
18 You got that in front of you?
- 19 A. Uh-huh.
- 20 Q. Do you know Dr. Anthony?
- 21 A. I believe we have met. I don't know him well.
- 22 Q. Is he preeminent in his field, doctor?
- 23 A. Yes.
- 24 Q. Do you know James Crawford, M.D.?
- 25 A. Yes.

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- 1 Q. Is he preeminent in his field, doctor?
- 2 A. Yes.
- 3 Q. Do you know Christopher P. Crum, C-r-u-m,
- 4 doctor?
- 5 A. I believe we've met.
- 6 Q. Is he preeminent in his field, doctor?
- 7 A. Yes.
- 8 Q. Do you know Umberto De Girolami?
- 9 A. We have met.
- 10 Q. Is he preeminent in his field, doctor?
- 11 A. Yes.
- 12 Q. Do you know Matthew Frosch, F-r-o-s-c-h?
- 13 A. I'm not sure that we've met. I think so.
- 14 Q. Is he preeminent in his field, doctor?
- 15 A. Yes.
- 16 Q. Do you know Lester Kobzik, K-o-b-z-i-k?
- 17 A. I don't believe so.
- 18 Q. Have you met Martin C. Mihm, Jr., M-i-h-m?
- 19 A. I don't believe so, no.
- 20 Q. Do you know George F. Murphy, sir?
- 21 A. Yes, we've met.
- 22 Q. Is he preeminent in his field, doctor?
- 23 A. Yes.
- 24 Q. Do you know Andrew E. Rosenberg, doctor?
- 25 A. We've met.

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- 1 Q. Is he preeminent in his field, doctor?
- 2 A. Yes.
- 3 Q. Do you know John Samuelson?
- 4 A. No.
- 5 Q. Does he have a reputation of being preeminent in
- 6 his field, doctor?
- 7 A. I believe so.
- 8 Q. Do you know Deborah Schofield,
- 9 S-c-h-o-f-i-e-l-d?
- 10 A. We have met.
- 11 Q. Is she preeminent in her field, doctor?
- 12 A. Yes.
- 13 Q. Do you know Franz von Lichtenberg?
- 14 A. I think we've met as well.
- 15 Q. Is he --
- 16 A. I don't remember.
- 17 Q. Is he preeminent in his field, doctor?
- 18 A. Yes.
- 19 Q. Doctor, I'd like to have you turn to page 381 of
- 20 Exhibit 1416, under "TOBACCO SMOKING," do you see
- 21 that, sir?
- 22 A. Yes.
- 23 Q. First sentence says, quote, "The adverse
- 24 consequences of cigarette smoke totally dwarf those
- 25 of all other pollutants combined," period, end

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1 quote.

2 Do you agree with that statement, doctor?

3 A. I'm not sure. I'd have to think about that.

4 Q. Go ahead.

5 A. I think I would agree with that.

6 Q. You agree that the adverse consequences of
7 cigarette smoke totally dwarf those of all other
8 pollutants combined; is that right?

9 A. We're talking about relative risks in large
10 populations. From that standpoint, I think I would
11 agree with this statement.

12 Q. The next sentence says, quote, "In the United
13 States, almost 400,000 persons died in 1985 of
14 various smoking -- of various diseases directly
15 attributable to cigarette smoking, representing 21
16 percent of all mortality," period, unquote.

17 Do you agree with that statement, doctor?

18 A. Like I say, I don't know. This is the 400,000
19 figure that we saw expressed differently earlier this
20 afternoon by the Institute of Medicine, and -- and
21 they would disagree, I guess, with this one.

22 Q. Pardon me. You would disagree with that?

23 A. No, I would -- I don't know --

24 Q. Well the fact --

25 A. It depends on what the reference is. I think

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1 they said more than 400,000. This says almost.

2 Q. All right.

3 A. So this may have been a different study. I
4 don't know what the source of that information is.

5 Q. Well would you give that sentence some
6 credibility since it appears in the Robbins
7 Pathologic Basis of Disease that you consult on a
8 frequent basis?

9 A. Well like I say, this -- this is a leading
10 textbook of pathological information, and this is a
11 statement concerning public health. I don't know
12 what the source of that is. I don't agree with
13 everything that's in the Robbins textbook of
14 pathology, it's pretty thick, and I've found things
15 in there that I disagree with.

16 This particular statement, I don't know.

17 Q. You just have no reason --

18 You don't know one way or the other; is that
19 right?

20 A. I don't know one way or the other.

21 Q. All right. And it goes on to say, quote, "It
22 has repeatedly been referred" -- that is, cigarette
23 smoking, quote -- "has repeatedly been referred to
24 as, quote, the single most important preventable
25 cause of premature death in the United States,"

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1 unquote.

2 Do you agree that cigarette smoking is the
3 single most important preventable cause of premature
4 death in the United States, doctor?

5 A. Well we talked about this earlier today. This
6 is the statement that was -- was in the Institute of
7 Medicine report. I don't know what the source of
8 this statement is.

9 Q. Doctor --

10 A. I don't know what it's based upon. They are
11 quoting it from somewhere, and I don't know what the
12 source is.

13 Q. All right. Well doctor, the fact that you have
14 seen in a National Academy of Sciences publication
15 and the fact that you have seen in the Robbins
16 Pathologic Basis of Disease, both organizations that
17 you have told me have preeminent people doing their
18 publishing, experts in their field, and in both of
19 those arenas those folks are saying, quote, "The
20 single most important" -- they're quoting a statement
21 that says, "The single most important preventable
22 cause of premature death in the United States is
23 cigarette smoking," does that cause you to agree with
24 that?

25 A. In fact the way this is stated in the sentence,

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1 Robbins Pathology is not making that statement.

2 Q. The Robbins Pathology is putting its seal of
3 approval on that statement; isn't it, doctor?

4 A. No. If I may finish, what they're saying, it
5 has been reportedly -- it has repeatedly been
6 referred to as, quote --

7 They're saying that somebody else has said that.

8 Q. That's right.

9 A. They're not saying that.

10 Q. That's right. But they are in effect putting
11 their seal of approval; that is, Robbins' book is
12 putting its seal of approval on that statement by
13 selecting it to be quoted in their textbook; isn't
14 that right, sir?

15 A. Well they're --

16 They have included it in their textbook,
17 that's -- that part's correct.

18 Q. And don't you believe that they believed it to
19 be true if they're including it in their textbook?

20 A. Well I find it a little unusual the way it's
21 described in there, "it's repeatedly been referred to
22 as." That could be interpreted different ways. Like
23 I say, I don't know what the -- the purpose was in
24 repeating that. I would have liked to have seen that
25 referenced. But I think they're giving an

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1 introduction to a section on tobacco smoking, and
2 this is a chapter nine, which is fairly early in the
3 book.

4 Q. So what?

5 A. These early chapters, as I remember right in
6 this textbook, were more summary chapters; they don't
7 go into a lot of detail. And this is a summary
8 chapter dealing with environmental and nutritional
9 diseases, which means it's a -- it's a general
10 summary chapter. It's not one of the more specific
11 chapters that ended up occurring later.

12 Q. Doctor, based on your 20-year association with
13 cancer and cigarette smoking and so forth, do you
14 agree that cigarette smoking is the single most
15 important preventable cause of premature death in the
16 United States?

17 A. I don't know how to respond to that. It's --

18 I don't know what the source of that is or what
19 the basis of that statement is.

20 Q. Doctor, I want to --

21 A. It appears that they didn't either.

22 Q. So do you think that they were just haphazard
23 and imprecise in putting that statement into their
24 textbook?

25 A. No. What I said is that they're quoting

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1 somebody else; they're not making the statement
2 themselves.

3 Q. I -- well they're --

4 They're putting the seal of approval on that
5 statement; aren't they, doctor, by having it appear
6 in their textbook?

7 A. Well they're repeating it. They're saying
8 somebody else said this.

9 Q. Yeah. But they are quoting that --

10 The Robbins people are quoting that with
11 approval; aren't they, doctor? Isn't that what you
12 would get from that?

13 A. No. They're -- they're reflecting somebody
14 else's conclusions. That's why they quoted it.

15 Q. Right.

16 A. That's not the author of this section's
17 conclusion, it's somebody else's conclusion.

18 Q. But do you think that they would put that quote
19 in a textbook if they believed it to be not true?

20 A. Like I say, I think they're making general
21 statements to try to introduce to the reader that
22 cigarette smoking -- with cigarette smoking, there is
23 a major risk of various diseases.

24 Q. And you believe that; don't you, sir?

25 A. Yes, I believe that.

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1 Q. Let's go back to the sentence then.

2 This is a preeminent textbook that we're looking
3 at here that people like yourself rely on who are
4 preeminent, presumably, in their field, and do you
5 think that the people at Robbins would put something
6 in that was inaccurate in the textbook, a statement
7 as declarative as "The single most preventable cause
8 of premature death in the United States is cigarette
9 smoking?"

10 A. No.

11 Q. Now let's for just a moment put aside where the
12 quote came from and let's put aside the exhibit for a
13 minute. Why don't we just put it down; that way we
14 won't get confused. Can you just put it down for a
15 minute?

16 A. (Complying.)

17 Q. Now without reference to the exhibit before you
18 and without reference to wherever the quote came
19 from, just in your experience, the knowledge that you
20 bring today to this table, again without reference to
21 anything other than your own experience, do you
22 believe that cigarette smoking is the single most
23 important preventable cause of premature death in the
24 United States?

25 A. I don't know that that's true.

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1 Q. Do you know --

2 A. From my experience -- if I may finish.

3 From my experience, there are other preventable
4 problems that take many more years away than smoking,
5 such as injury in children, and I don't know how this
6 comparison has been made or whether that's been
7 factored in or not.

8 Q. I'd like to have you tell me as you sit here
9 today, based on your experience, what is a more
10 important preventable cause of premature death in the
11 United States than cigarette smoking.

12 A. Well one that ranks very high, and I haven't
13 gone back and looked at this to see what the basis
14 for this statement is, but one that ranks very high
15 are accidents in children, and those are considerable
16 years of productive life lost when a child is
17 injured, injured or killed in an accident. So I
18 don't know if that is factored in to this or not.

19 This is a very general statement that's in an
20 introductory paragraph, and I don't know what the
21 basis of it is. But I do know that injury in
22 children is a major public health problem.

23 Q. Tell me what other important preventable causes
24 of premature death are in the United States that are
25 more important than cigarette smoking.

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1 A. I don't know the ones that are more important.

2 Like I say, I haven't looked at this for some time

3 and made these types of comparisons.

4 Q. But do you think accidents in children are a

5 more important preventable cause of premature death

6 in the United States than cigarette smoking?

7 A. I don't know. I -- I haven't made those

8 comparisons. I'm just saying that that's a major

9 basis for productive years of life lost or premature

10 death. Another one is vehicle accidents, but I don't

11 know how that compares with this one. I would have

12 to go back and make those comparisons.

13 Q. So you don't know whether vehicle accidents are

14 a more important preventable cause of premature death

15 in the United States than cigarette smoking?

16 A. No, I don't. Not at this stage.

17 Q. Could you turn the page, doctor, to 382 of

18 Exhibit 1416. On the right-hand side of the page

19 there, doctor, first of all, do you see Table 9.3

20 there, "SUMMARY OF ESTIMATED RELATIVE RISKS FOR

21 CURRENT CIGARETTE SMOKERS IN THE UNITED STATES...?"

22 A. Yes. That's 9-3.

23 Q. What did I say?

24 A. 9.3.

25 Q. I'm sorry.

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1 Would you look at that table. Just read that
2 table and tell me if you disagree with any of the
3 figures there.

4 A. Okay. These are relative risks from cigarette
5 smoking, and for lung in men the relative risk is
6 22.36, for women it's 11.94.

7 Q. Do you agree with that, those figures?

8 Why don't you take a moment to read the whole
9 Table 9-3 and just tell me what you agree and
10 disagree with. Or maybe it's easier if you tell me
11 what you disagree with if you don't disagree with
12 very much.

13 A. Okay, I've looked at the table.

14 Q. I'm sorry?

15 A. I've looked at the table.

16 Q. You're looking at Table 9-3 on page 382 of
17 Exhibit 1416; aren't you, doctor?

18 A. Yes.

19 Q. Do you disagree with any of the figures in Table
20 9-3?

21 A. I haven't gone back and compared these with the
22 source. These are out of the Surgeon General's
23 report. "25 Years of Progress" that we talked about
24 earlier is actually where these came from.

25 I don't have any basis to disagree with these.

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1 I've seen similar numbers for relative risks for
2 various types of disease, so those are along the same
3 lines as other numbers I've seen.

4 Q. So there's nothing in Table 9-3 that you
5 disagree with?

6 A. Not without going back and comparing it with the
7 earlier Surgeon General's report. I think it's
8 consistent with the epidemiologic studies that I've
9 seen in the past. They're in these ranges.

10 Q. Doctor, would you drop down to the first full
11 paragraph on the right-hand side of the page, starts
12 with "Coronary heart disease...."

13 A. Yes.

14 Q. And the first sentence reads, quote, "Coronary
15 heart disease, particularly myocardial infarction,
16 paren, MI, close paren, is the number one cause of
17 death related to cigarette smoking; MI is responsible
18 for more than 20 percent of all deaths from heart
19 disease." Do you see that?

20 A. Yes, I see that.

21 Q. Do you agree with that sentence, doctor?

22 A. Let me read the first part of it again.

23 Q. That's a good idea. Let's -- let's start with
24 the sentence before the semicolon. Let me read
25 that. Quote, "Coronary heart disease, particularly

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1 myocardial infarction, paren, MI, close paren, is the
2 number one cause of death related to cigarette
3 smoking, semicolon...." Do you agree with that,
4 doctor?

5 A. I'm not sure. I believe that's in --
6 What they're referring to is in men, not
7 generally. In men, myocardial infarction would be
8 the number one cause of death.

9 Q. Related to cigarette smoking; is that right?

10 A. "Related" to means that there's -- that disease
11 is increased -- or this disease results in death in
12 men and there's a relationship with cigarette
13 smoking, is the way I read the sentence.

14 Q. Well let's read the sentence as it's written.

15 A. I think that's how it's written.

16 Q. Well let me read the sentence as it's written
17 and we'll have it on the record.

18 A. Okay.

19 Q. Quote, "Coronary heart disease, particularly
20 myocardial infarction, paren, MI, close paren, is the
21 number one cause of death related to cigarette
22 smoking, semicolon..." Do you agree or disagree with
23 that?

24 A. I -- I think I misread the sentence to begin
25 with.

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1 Q. Well let's read it together into the record, and
2 we'll do it slowly.

3 A. I want to see -- "is the number one cause of
4 death related to cigarette smoking" and "is
5 responsible for 20 percent of the deaths due to heart
6 disease." I don't understand that sentence. I
7 misread it the first time I read it.

8 Q. You don't understand the sentence?

9 A. No, actually I don't. The -- the first part of
10 the sentence --

11 Well like I say, I just don't understand the
12 sentence the way it's written.

13 Q. All these preeminent people in this book that is
14 preeminent in its field and one that you consult from
15 time to time, that sentence -- they have written
16 something that is impossible for you to understand?

17 A. I think the way this sentence is -- is written
18 is difficult to understand. I mean this is a long
19 textbook, and this sentence could be a little clearer
20 with some editing.

21 Q. Well what do you disagree with in that sentence
22 that says "Coronary heart disease, particularly
23 myocardial infarction, paren, MI, close paren, is the
24 number one death related to cigarette smoking...,"
25 unquote? What do you disagree or what do you find

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1 unclear?

2 A. I don't know with relationship to what. In
3 other words, I don't know if they're only talking
4 about myocardial infarction in men being the number
5 one cause of death, or if that part of the myocardial
6 infarction that has a relationship to cigarette
7 smoking is what they are referring to. The way the
8 comma is placed in this, it's unclear. And
9 especially after the semicolon where it says
10 myocardial infarction is responsible for more than 20
11 percent of all deaths from heart disease, I'm not
12 sure how that relates to the first part of this
13 sentence. Like I said, the sentence is a little
14 confusing.

15 Let me see if I can -- well it's a --

16 It's a confusing sentence. I don't want to try
17 to rewrite their sentence for them.

18 Q. Well first of all, we don't see that that
19 sentence refers to men alone; do we?

20 A. No. That's why I say I misread the sentence to
21 begin with.

22 Q. Well let's take the sentence as it is. Are you
23 unable to understand the sentence? And if you are
24 unable to understand the sentence, will you be unable
25 to answer any questions about it?

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1 A. Okay. As I read the rest of the paragraph, I
2 think I understand what they're talking about. This
3 is referring to Table 9-3, Table 9-3, coronary
4 disease --

5 I think I understand what they're referring to.

6 Q. Well let's do it -- try it again.

7 Do you agree with the sentence that says, quote,
8 "Coronary heart disease, particularly myocardial
9 infarction, paren, MI, close paren, is the number one
10 cause of death related to cigarette smoking,
11 semicolon...", unquote. Do you agree with that or
12 not?

13 A. No, I don't.

14 Q. Why not?

15 A. Because it uses "cause" in a way that relates
16 cigarette smoking directly to coronary heart disease,
17 and again, the statistical association has been shown
18 in epidemiologic studies, but we do not have a
19 laboratory animal model that we have been able to use
20 to show the mechanisms.

21 Q. Well now, doctor, you'll agree with me that this
22 Robbins textbook is not being used by the general
23 public; isn't that right?

24 A. I assume it's not being used by the general
25 public.

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1 Q. It's being used by sophisticated professionals
2 like yourself; isn't that right, sir?

3 A. Well it's actually a textbook for pathology.
4 It's the textbook that I had for pathology when I was
5 in school.

6 Q. But it's being used, and the readers are
7 presumed to be sophisticated, at least medical
8 students; is that right?

9 A. That's correct.

10 Q. And are you telling me that in using the word
11 "cause" in that sentence, these preeminent authors
12 writing for an audience that is, at least to some
13 degree, scientific, these authors are guilty of
14 sloppy writing?

15 A. What I'm saying is that these authors in this
16 summary section, chapter nine, where they're going
17 through and summarizing a set of diseases, are
18 providing some overall statements of what they feel
19 the relative risks are of smoking, and which is shown
20 in Table 9-3, and what I'm saying is that I would
21 prefer in a technical textbook that they not use
22 "cause" this way, but that they use "relative risk"
23 as they have in the table above, which is also
24 referred to in this section.

25 Q. So are these preeminent authors of this textbook

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1 guilty of sloppy science?

2 A. No.

3 Q. Well you believe they have misused the word

4 "cause" in that sentence; is that right, sir?

5 A. They're using it in a broad sense, in a summary

6 sense. And it's --

7 Like I say, that's a word that's used generally,

8 in a regulatory sense; has a lot of different

9 meanings. And they're using it in a way that I think

10 this would be clearer if they continued to use

11 "relative risks" as they did above in Table 9-3.

12 Q. Now considering that this textbook is going to

13 be used by medical students and other medical -- and

14 medical students who are forming opinions and

15 learning about medicine, do you believe that the use

16 of the word "cause" in that sentence will be

17 misleading to those medical students?

18 A. I don't know. If it's -- if it's used in a

19 vague way it could be misleading to professionals,

20 but people that -- that know and do research in this

21 area I think understand what that means.

22 Q. It seems to be from what your answer is, and

23 tell me if I'm wrong, that there's a substantial risk

24 of misleading impressionable medical students by the

25 use of the word "cause" in that sentence. Am I right

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1 about that?

2 A. No.

3 Q. Why not?

4 A. Like I say, this is a summary section which is
5 written to give an overview. I would expect these
6 medical students to go to the chapter on lung
7 diseases, which is a much more detailed chapter and
8 deals with these issues in a lot of detail, and you
9 would probably not see these types of words used in
10 that chapter.

11 This is meant to be an overall summary chapter
12 and deals in a summary way.

13 Q. So the --

14 A. So that the students would go to the more
15 detailed technical material later in the volume.

16 Q. So the summary chapters can be scientifically
17 imprecise as long as the other chapters are more
18 precise. Is that your testimony, doctor?

19 A. Well they're, in a short timeframe, trying to
20 convey information to students to give them an
21 overview, and they cannot go into the specifics that
22 in later chapters they would.

23 They've actually got some of this material
24 already in Table 9-3, and they referred to it there
25 appropriately as "relative risks," and I think as

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1 they got into more detailed discussion of this they
2 would clarify those issues.

3 Q. Isn't that kind of sloppy scientific writing to
4 do it that way, doctor?

5 A. No, not at all. A lot of textbooks have
6 introductory and summary materials at the beginning
7 to initiate new students or new readers, and then
8 those that continue on and go into the more detailed
9 technical material go into much more depth.

10 Q. What --

11 A. It's a learning process.

12 Q. Wouldn't an impressionable medical student
13 reading the summary here, where it talks about cause,
14 and then going to another chapter and talks about
15 something else, wouldn't that impressionable medical
16 student be confused, doctor?

17 A. I don't think they would be confused by this.

18 Q. The next sentence where it says "Cancer of the
19 lung closely follows," do you see that?

20 A. Yes.

21 Q. What the Robbins textbook is saying is that
22 cigarette smoking causes lung cancer; isn't it?

23 MR. RYERSON: Objection as to form.

24 Q. Isn't that what it's telling you, doctor,
25 cigarette smoking causes lung cancer?

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1 A. No, that's not what they're saying. This
2 paragraph is talking about the relative risks of
3 mortality from cigarette smoking. The first one it
4 talks about is coronary heart disease, and the second
5 one it talks about is cancer.

6 Q. Right. Lung cancer.

7 A. So --

8 Q. Right?

9 A. Lung cancer.

10 Q. All right. Well let's skip over that for a
11 moment. Let's go to the next sentence. It says,
12 quote, "Cigarette smoking is also a major risk factor
13 for chronic obstructive pulmonary diseases, paren,
14 chronic bronchitis and emphysema, close paren, and
15 for other forms of cancer as well, as is evident in
16 Table 9-3," period, unquote.

17 Do you agree with that statement, doctor?

18 A. Okay. What they're referring to is Table 9-3 --

19 Q. Doctor, don't tell me what they're referring
20 to. I can read that. Do you agree with the
21 sentence?

22 A. I agree with the sentence. I think it fairly
23 well summarizes Table 9-3.

24 Q. All right, doctor, let's drop down for a
25 moment. Do you see the sentence that says, quote,

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1 "Indeed, smoking is the single most significant
2 cause of cancer mortality in the United States,
3 thought to contribute to about one-third of all
4 cancer deaths and almost all of the more than 140,000
5 lung cancer deaths," period, unquote? Do you agree
6 with that statement, doctor?

7 A. We've already talked about the cause of cancer.

8 Q. Well let's talk about that statement in the
9 Robbins book, which is a preeminent textbook and one
10 that you referred to. Do you agree with that
11 statement, doctor?

12 A. Well that's the same statement we discussed
13 earlier. They've just gotten through --

14 This shows how the writing -- how they're using
15 "cause" as a relative term in that the sentence
16 before they talked about risk factors, and so they're
17 using them interchangeably.

18 Q. Do you think that's sloppy scientific writing,
19 doctor?

20 A. It's writing that --

21 It's not sloppy scientific writing, it's writing
22 that you see in summary types of material, which is
23 what that is.

24 Q. Do you think this is imprecise scientific
25 writing, doctor?

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- 1 A. It's imprecise scientific writing.
- 2 Q. Would that detract from the credibility of this
- 3 Robbins book as a reference for medical students?
- 4 A. No.
- 5 Q. Let's go back to the sentence, quote, "Indeed,
- 6 smoking is the single most significant cause of
- 7 cancer mortality in the United States, thought to
- 8 contribute to about one-third of all cancer deaths
- 9 and almost all of the more than 140,000 lung cancer
- 10 deaths," unquote. What do you disagree with in that
- 11 sentence, doctor?
- 12 A. Disagree with how they have used "cause." In
- 13 the next statement they've --
- 14 Q. Well before we get to the next statement, --
- 15 A. All right.
- 16 Q. -- can we just stick with that statement?
- 17 A. I'd disagree with the use of "cause."
- 18 Q. Okay. What would you substitute for "cause?"
- 19 A. We've talked about this before: major risk of
- 20 cancer mortality in the United States.
- 21 Q. The next sentence says, and I quote, "The risk
- 22 of mortality is dose related, hyphen, the more
- 23 pack-years of smoking, paren, number of packs per day
- 24 times number of years, close paren, the higher the
- 25 risk of mortality," period, unquote. Do you agree

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1 with that sentence, doctor?

2 A. Yes. I think epidemiologic studies show that
3 type of relationship.

4 Q. And then drop below that, doctor, where it says,
5 quote, "Similarly, smoking is largely responsible for
6 the 57,000 deaths related to chronic obstructive
7 pulmonary disease," unquote. Do you agree with that
8 statement, doctor?

9 A. I don't know.

10 Q. Pardon me?

11 A. Like I say, I don't know what the basis of that
12 is.

13 As you see, they have referred the reader to
14 chapter 15, which is the more detailed analysis of
15 this, and I don't know what the -- how they conducted
16 that analysis or what the 57 deaths represent.

17 Q. Fifty-seven thousand deaths?

18 A. Fifty-seven thousand deaths, if that's a
19 statistical average or it's a probability
20 calculation, I don't know how they derived that, so I
21 don't --

22 Q. You don't know the answer.

23 A. I can't answer that.

24 Q. Well if you pulled out the 57,000 deaths number
25 and if the sentence read, quote, "Similarly, smoking

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1 is largely responsible for the deaths related to
2 chronic obstructive pulmonary disease," unquote,
3 would you agree with that?

4 A. I don't --

5 It's still pretty vague, "largely responsible
6 for." Like I say, it's -- it's a risk factor for
7 chronic obstructive lung -- pulmonary disease. If
8 that's what they mean by "largely responsible for" --

9 Those are pretty vague terms.

10 Q. Well are the authors here guilty of sloppy
11 scientific writing?

12 A. The only thing they're doing is they're
13 summarizing something that is described in more
14 detail in chapter 15.

15 Q. Well is it sloppy or imprecise scientific
16 writing?

17 A. It's simply a summary.

18 Q. Well is --

19 A. This is a summary section --

20 Q. I understand.

21 A. -- where they're giving the reader a summary.

22 Q. I understand it's a summary section. You don't
23 have to tell me that again because I understand
24 that. But are they guilty, are these preeminent
25 authors guilty of sloppy, imprecise scientific

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1 writing in the way that they've structured that
2 sentence?

3 A. No.

4 Q. Are they guilty of, when they say smoking is
5 largely responsible for this number of deaths related
6 to chronic obstructive pulmonary disease, are they
7 misleading?

8 A. I don't know.

9 Q. Don't have any idea?

10 A. I would not think they would be misleading. I
11 haven't looked at chapter 15 yet to see what it
12 refers to.

13 Q. Well based on your experience in this field,
14 doctor, as an expert that you claim to be, without
15 reference to chapter 15, do you believe that smoking
16 is largely related, or the deaths -- I'm sorry.

17 Do you believe that smoking is largely
18 responsible for the deaths, of whatever number,
19 related to chronic obstructive pulmonary disease?

20 A. Well as I said, I -- I wouldn't use those
21 terms. I would say that it's a major risk factor.

22 Q. In COPD?

23 A. Yeah, in COPD.

24 Q. That is, cigarette smoking is a significant risk
25 factor in COPD?

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1 A. It's a major risk factor for COPD.

2 Q. Let's drop down to the next paragraph, doctor.

3 First sentence in the next paragraph says, and I

4 quote, "The unborn child and the infant are also

5 adversely influenced by maternal smoking," period,

6 unquote.

7 Do you agree with that, doctor?

8 A. Based on the epidemiologic studies, I have to

9 agree that there's some influence of maternal smoking

10 on the --

11 Q. Adverse influence; isn't that right, doctor?

12 A. There was some adverse influence because there's

13 low birth weight in infants born to smoking mothers

14 from the epidemiologic studies, so that would be an

15 adverse influence.

16 Q. Well over and above the epidemiological studies,

17 do you believe that the unborn child is adversely

18 influenced by maternal smoking?

19 A. The only evidence that we have is the

20 epidemiologic studies to date.

21 Q. And you consider yourself to be an expert in

22 epidemiology; don't you, doctor?

23 A. I'm not an epidemiologist. I've conducted

24 studies in epidemiology. I know the techniques that

25 are used, but I'm not an epidemiologist.

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1 Q. Well on page -- on the first page of your report
2 1401 you tell us, quote, "My training and
3 professional experience is in toxicology, pathology
4 and epidemiology," unquote.

5 A. That's correct.

6 Q. So you have some expertise in epidemiology?

7 A. Yes.

8 Q. So if epidemiological studies show that there's
9 a well-defined association between cigarette smoking
10 and an increased incidence of low birth weight,
11 premature, spontaneous abortion, stillbirth --
12 stillbirths and infant mortality, unquote, would you
13 agree with that, doctor?

14 A. I would agree with the studies that I've
15 reviewed that show that there is a statistical
16 association, some of them better-defined than others,
17 not all of these are well-defined.

18 Q. Well do you --

19 A. But there is a statistical association between
20 several of these, such as low birth weight.

21 Q. Well where is --

22 Is the sentence inaccurate with any -- with
23 respect to any of the subjects discussed therein?

24 A. The associations are stronger --

25 There's a strong, well-defined statistical

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1 association for low birth weight. Prematurity, as I
2 remember right, is -- is not as well-defined; it's a
3 weaker association.

4 Q. How about the association between cigarette
5 smoking and spontaneous abortions?

6 A. Again that's not as well defined as low birth
7 weight.

8 I think if a person were to add some of these
9 together, then -- I don't know, it -- this is --

10 Again, this is a summary statement that is meant
11 to give an introduction to medical students and
12 others studying pathology with the idea that as the
13 person reads further and gets into the more detailed
14 chapters, they will get a complete description of
15 this. Whether all of these are well-defined, I
16 don't --

17 From my reading, I don't think all of them are
18 well-defined, so I could not agree with the whole
19 statements.

20 Q. Well which ones do you not agree with, doctor?

21 A. Prematurity and spontaneous abortion I don't
22 think are that well-defined. Stillbirths I don't
23 know about.

24 Q. How about infant mortality, is there a
25 well-defined association between cigarette smoking

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1 and infant mortality?

2 A. I don't know. I'd have to go back and look.

3 Low birth weight is the one that is the
4 best-defined of those. Like I say, in the summary
5 they're lumped together.

6 Q. Doctor, you're giving me the impression that the
7 summary is very poorly written and has a sloppy
8 scientific basis to it. Am I correct in what you're
9 trying -- what you're saying?

10 A. No.

11 Q. Do you think that the summary, then, is an
12 accurate reflection of the state of medicine with
13 respect to those issues --

14 A. I don't --

15 Q. -- in the summary?

16 A. I don't think it's a detailed description of
17 what we know about those. It's simply a summary.

18 Q. You can put that down now, doctor.

19 (Plaintiffs' Exhibit 1417 was marked
20 for identification.)

21 BY MR. KAYSER:

22 Q. Doctor, I'm showing you what has been marked as
23 Plaintiffs' Exhibit 1417, which is also from the
24 Robbins textbook, and it includes pages 685 and 686.

25 A. Yes.

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1 Q. And it is a fairly scientific --

2 There's some fairly scientific writing which I'm
3 not going to try to read, but I would like to direct
4 your attention to page 686. On the bottom of the
5 page do you see Arabic one?

6 A. Yes.

7 Q. And you can see that there are four paragraphs
8 there; isn't that right, sir? Four numbered
9 paragraphs?

10 A. Yes, there's four numbered statements.

11 Q. All right. I'd like to have you read to
12 yourself those four numbered statements, and at the
13 end of your reading I'm going to ask you which ones
14 you disagree with.

15 A. Okay, I've finished reading those four
16 statements.

17 Q. Okay. Do you disagree with any of the four
18 numbered paragraphs, doctor, on page 686 of Exhibit
19 1417?

20 A. In the context of the way these are written,
21 this is part of the protease/anti-protease hypothesis
22 to explain how cigarette smoking may be causing
23 emphysema in smokers, and these are -- these are
24 statements in support of that hypothesis, some of
25 which have been shown to be true, some of which have

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1 not.

2 Q. Tell me the ones that have not been shown to be
3 true, and do it by numbered paragraph, if you would,
4 doctor.

5 A. Yes. Number one -- like I say, this is part of
6 an hypothesis -- I think I agree that those
7 activities have been shown in smokers.

8 Q. We're talking about paragraph one?

9 A. Paragraph one. We don't understand quite the
10 last --

11 Very last sentence of that paragraph says, "In
12 addition, nicotine is chemotactic for neutrophils,
13 and cigarette smoke activates the alternative
14 complement pathway." We don't really understand how
15 nicotine is chemotactic for neutrophils and how this
16 alternative pathway is activated, so I agree that
17 that's something that is being currently
18 investigated.

19 Q. All right. And paragraph two, do you agree or
20 disagree with that sentence?

21 A. I agree with two.

22 Q. And paragraph three, do you agree or disagree
23 with that sentence?

24 A. I'd agree with three, that we do see that.

25 Q. And paragraph four, do you agree or disagree

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1 with that sentence, paragraph four?

2 A. Number four is one that is very difficult and is
3 being investigated right now. In fact, we don't know
4 how oxidants in cigarette smoke lead to the
5 production of free radicals from neutrophils, and so
6 number four is really an area of research right now,
7 and so I couldn't agree with four just because I
8 don't think we know how that occurs yet. That's
9 what's being -- this is part of a --

10 These four statements are part of an hypothesis,
11 and that is what's being proposed as part of a
12 mechanism for damage of the protease/anti-protease
13 hypothesis, and I don't think four has been shown.

14 Q. All right, doctor, would you turn to page 685,
15 which is the page before that. Do you see the first
16 sentence, or the sentence in italics which is the
17 second sentence of the page?

18 A. "The most plausible..." is that what you're
19 referring to?

20 Q. No, "There is a clear-cut association...."

21 A. Oh, "There is a clear" -- okay.

22 Q. The sentence reads, quote, "There is a clear-cut
23 association between heavy cigarette smoking and
24 emphysema," and it goes on, but just stopping with
25 that part, do you believe that there is a clear-cut

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1 association between heavy cigarette smoking and
2 emphysema?

3 A. Yes. That's referring to a statistical
4 association.

5 Q. Okay.

6 A. There is a clear association from the
7 epidemiologic studies.

8 Q. And you respect those epidemiologic studies;
9 don't you, doctor?

10 A. They're published in peer reviewed journals.
11 I -- as I read those, I accept those as appropriately
12 conducted studies.

13 MR. KAYSER: May we go off the record for a
14 moment?

15 (Discussion off the record.)

16 (Deposition recessed at 4:58 o'clock p.m.)

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1 C E R T I F I C A T E

2 I, Richard G. Stirewalt, hereby certify
3 that I am qualified as a verbatim shorthand reporter;
4 that I took in stenographic shorthand the testimony
5 of RICHARD D. THOMAS at the time and place aforesaid;
6 and that the foregoing transcript consisting of pages
7 1 through 313 is a true and correct, full and
8 complete transcription of said shorthand notes, to
9 the best of my ability.

10 Dated at Minneapolis, Minnesota, this 8th
11 day of October, 1997.

12

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14

15 RICHARD G. STIREWALT

16 Registered Professional Reporter

17 Notary Public

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1 C E R T I F I C A T E

2 I, RICHARD D. THOMAS, the deponent, hereby
3 certify that I have read the foregoing transcript
4 consisting of pages 1 through 313, and that said
5 transcript is a true and correct, full and complete
6 transcription of my deposition except:

7

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11

12

13

14

15 RICHARD D. THOMAS

16 Deponent

17

18 Sworn and subscribed to before me this day
19 of , 1997.

20

21

22

23 Notary Public

24

25 My commission expires .

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